

SMOKE SIGNALS

For Radio Amateurs • By Radio Amateurs

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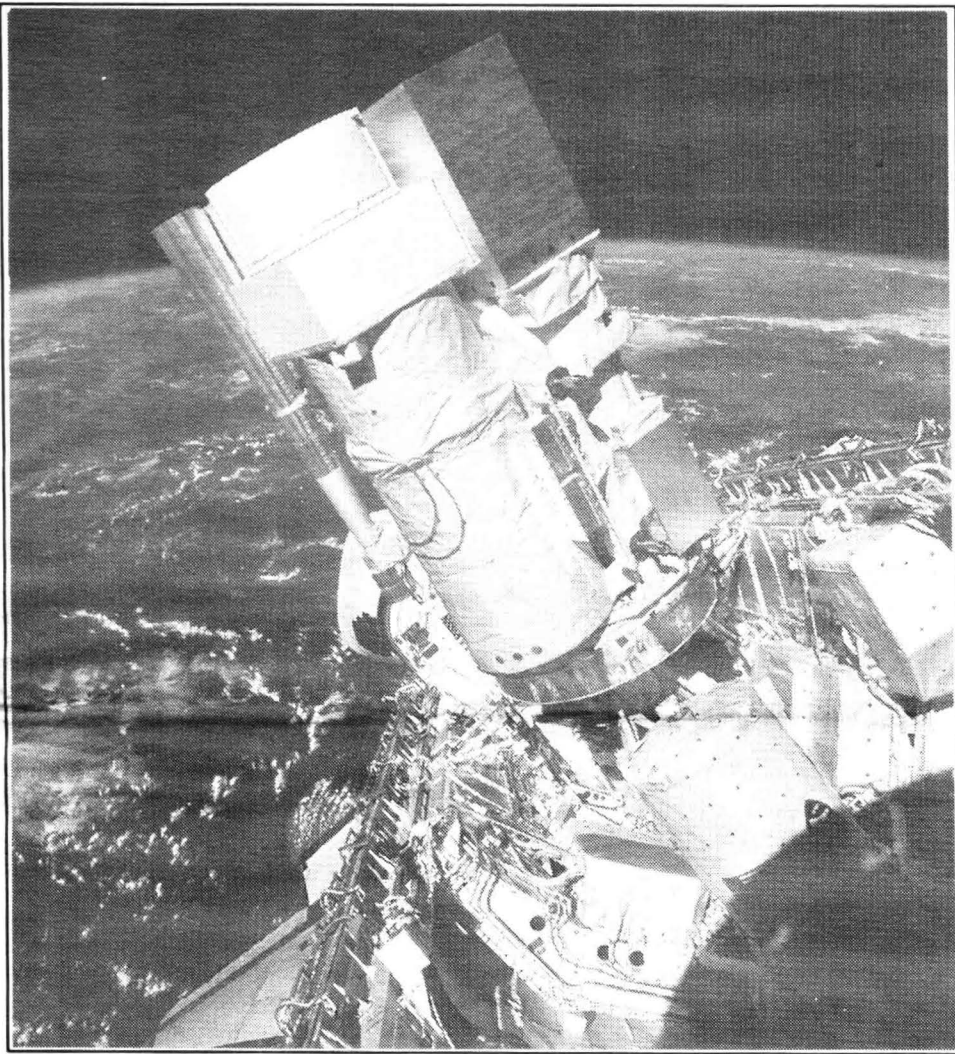
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Space veteran enshrined at the Space Place

By Paul Nelles, K9DB
663 Kris Drive, Mosinee, WI 54455



The Astro-1 package aboard Columbia in 1990. WUPPE is the instrument on the right topped by the dark rectangular sunshade. The cylindrical object next to WUPPE is the Hopkins Ultraviolet Telescope (HUT). This view of the cargo bay was taken looking aft.

NASA photo

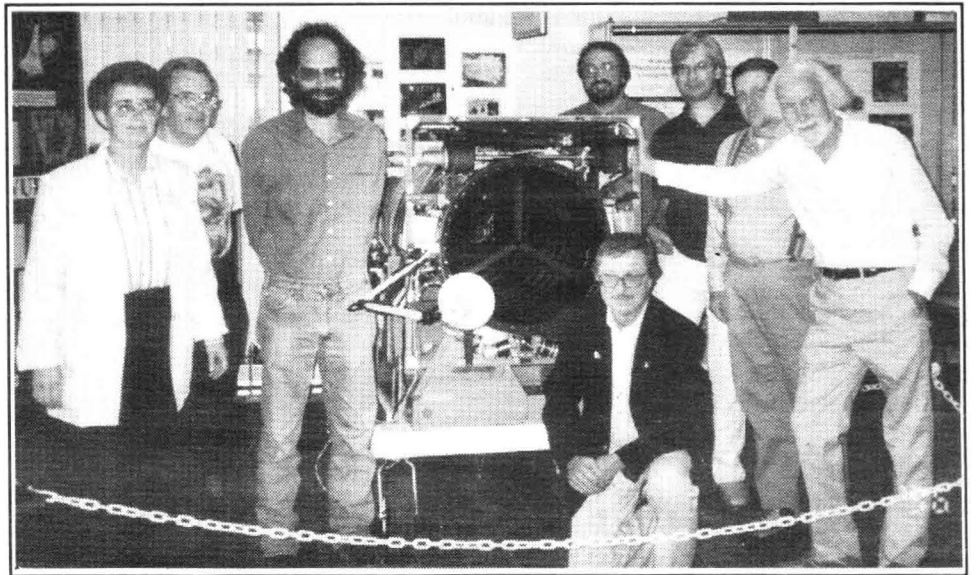
The Wisconsin Ultraviolet Photo Polarimeter Experiment (WUPPE) was put on permanent display at the University of Wisconsin Space Place on Tuesday, September 10. (WUPPE is pronounced WOOP-ee as in Goldberg.)

WUPPE is the ultraviolet telescope that flew aboard the Space Shuttle Columbia in December 1990 as part of the STS-35 Astro-1 mission. In March 1995 as Astro-2, it was part of the of the record breaking endurance STS-67 mission of the

Endeavor. Both flights were SAREX missions.

WUPPE measured the degree and direction of polarization at many different UV wavelengths. This information was used to help understand the structure of distant objects and the space between them and Earth. Since most of the ultraviolet light that reaches the earth does not penetrate the atmosphere, the only place these observations can be made is in space.

Two Wisconsin Amateurs were instru-



On hand for the dedication of the WUPPE exhibit were; left to right: Peg Haese, KB9LIE; John Hicks, KA9KYB; San Rotter, WB9ELB; Paul Nelles K9DB; Don Michalski, W9IXG; Kevin Kolpitke WB9YHB, Stas Wnukowski KC2AK, and Art Code KF9VO. Michalski is the associate director of the University of Wisconsin Space Astronomy Laboratory which built WUPPE. Code is the former director of SAL and was the Principal Investigator for both WUPPE missions.

Photo courtesy Paul Nelles/K9DB

mental in WUPPE's success. Dr. Arthur Code KF9VO, UW Professor of Astronomy and founder of the UW Space Astronomy Laboratory was the Principle Investigator for both missions. WUPPE was built at SAL under the direction of Don Michalski W9IXG, Associate Director of the Lab. Both Code and Michalski are active on Madison area repeaters.

WUPPE joins another Wisconsin-built UV space telescope, an engineering model of the Orbiting Astronomical Observatory, launched in the late 1960's, already on display at the Space Place.

The UW Space Place is an outreach education center, open to the public, that specializes in astronomy and space science. It is operated by the UW Space Astronomy Lab and Astronomy Department with support from other UW depart-

ments specializing in the space sciences. Public lectures are given the second and fourth Tuesdays of each month. It is located on South Park Street in Madison. With the help of the Badger Amateur Radio Society (W9YT) and the Four Lakes Amateur Radio Club (W9JZ), plans to establish an Amateur Radio station at the Space Place are underway. This facility will be known as the Space Place Amateur Radio Center or SPARC.

The event also served as a farewell gathering for Code who is moving to Arizona to assume the position of Resident Scientist for the WIYN telescope at Kitt Peak near Tucson. The WIYN observatory is owned and operated by a consortium of the Universities of Wisconsin, Indiana, Yale, and the National Optical Astronomy Observatory. □

Happy Thanksgiving



from the staff of Badger State Smoke Signals

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WHAT'S HAPPENING

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✂ Amateur Radio Exam Schedules

EDITED BY KENNETH A. EBNER, K9EN, 822 WAUONA TRAIL, PORTAGE, WI 53901

Swapfests and Other Social Events

SATURDAY, NOVEMBER 2, 1996. The Milwaukee Repeater Club is proud to sponsor the 12th annual "6.91" Friendly Fest, from 8:00 a.m. to 1:00 p.m. (sellers admitted at 6:30 a.m.) Place: Waukesha County Expo Center Forum, I-94 to County J, South to FT, West to Expo. Tickets are just \$4.00. Four-foot tables, \$5.00. Call Burt, N9VBI, (414) 328-0535 or send with SASE and payment to The Milwaukee Repeater Club, P.O. Box 2123, Milwaukee, WI 53201, Before October 15, 1996. Talk in on 146.91 - (The Friendly Repeater) and on 146.52. On-site Amateur Exams.

SUNDAY, NOVEMBER 3, 1996. Fox Cities Hamfest, Starlite Club, Hwy 55, North of Kaukana, WI. Amateur Exams. Advance Registration \$4.00, 8 foot long tables \$8.00. Contact: Chad Pennings, N9PRC, 318 E. Brewster St., Appleton, WI 54911. (414) 954-1229.

SUNDAY, JANUARY 12, 1997. West Allis ARC, 25th Annual Midwinter Swapfest. Waukesha County Expo Center Forum, Waukesha, WI. Contact: WARAC Swapfest, PO Box 1072, Milwaukee, WI 53201.

SUNDAY, DECEMBER 8, 1996. The Ashwabenon High School Tech Club will be holding a ham radio and computer fleamarket at Ashwabenon High School, 2391 South Ridge Road, in Green Bay, WI. Directions to AHS: from Highway 41 North or South, take Oneida Street Exit. Turn East, towards Exel Inn, continue on Oneida Street until Anderson Drive. Turn left at stoplight onto Anderson Drive, continue past football field to Ashwabenon High School on the right. Talk in is on the 147.075+ repeater. Admission is \$3.00 in advance or \$4.00 at the door. 4 ft of table space is available for \$4.00 in advance or \$5.00 at the door. Vendor set up is on December 7, 1996 from 7:00 pm to 10:00 pm. If you need motel rooms, be sure to reserve early as there is another

event in town that day. For more information contact: Scott Cole, KB9AMM, P.O. Box 12631, Green Bay, WI 54307. (414) 496-0989 (days) or (414) 496-0990 (nights).

Email: n9pay@sparknet.net.

Packet: N9PAY@KB9ALN.#GRB.WI.USA.NOAM.

Web: <http://www.sparknet.net/~n9pay/fest.html>

SUNDAY, FEBRUARY 25, 1997. Red Cedar Repeater Association, Inc. Auction at the American Legion Post #53, 634 Water St., Eau Claire, WI. Contact: Steve Hart, KA9OMC, E616 810 Ave., Knapp, WI 54749. (715) 665-2374.

SUNDAY, MARCH 9, 1997. SEWFARS SWAPFEST, Waukesha County Expo Center, Waukesha, WI. Contact: SEWFARS, P.O. Box 102, Delafield, WI 53018. (414) 650-0724.

SUNDAY, MARCH 16, 1997. Tri-County ARC Hamfest at the Jefferson County Fairgrounds, Activity Center, Hwy. 18 West, Jefferson, WI. Contact: TCARC, W9MQB, 711 East St., Fort Atkinson, WI 53538. (414) 563-6502 evenings.

SATURDAY, JULY 12, 1997. South Milwaukee ARC Swapfest. American Legion Post 434, Oak Creek, WI. Contact (414) 762-3235.

See also the back page and flyer ads for additional information on many of these events. Let us know of your dates as soon as you know them. We will list them and perhaps help avoid conflicts with other events.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas. Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

material should be sent no later than the 9th of that month. This material is to be sent to the Editor.

Where to Send It

Address changes and corrections should be sent to Ken Ebner.

Editorial material, photographs, feature articles, display ads, and exchange papers should be sent to Jim Romelfanger.

Inquiries about advertising should be directed to Ken Ebner.

Club, swapfest, and Test Point information should be sent to Ken Ebner.

Swapfest ads should be sent to Jim Romelfanger.

Subscriptions should be sent, with check or money order, to Jim Decker.

Conditions for Reprinting or BBS Posting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles or posting articles on radio or telephone bulletin boards from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. **THIS CREDIT IS MANDATORY, AND NO MATERIAL MAY BE PRINTED OR POSTED UNLESS IT IS GIVEN.** This newspaper is produced by volunteer Radio Amateurs, and is non-profit. This newspaper is mailed from Portage, WI 53901. *Badger State Smoke Signals* is incorporated as a Wisconsin non-stock, non-profit organization.

Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.

Badger State Smoke Signals

Amateur Radio Education and Information

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TREASURER: Jim Decker, WB9UQT, P.O. Box 337, Baraboo, WI 53913-0337.

EDITORIAL BOARD: Ken Ebner, K9EN; Dave Knaus, WA9POV; Don Evenson, K9JYX; Jim Romelfanger, K9ZZ.

Subscriptions

1 year	(12 issues)	\$12.00
2 years	(24 issues - save \$2.00)	\$22.00
3 years	(36 issues - save \$4.00)	\$32.00

Special club package reduced rates are available. For information, contact Ken Ebner, K9EN.

When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1.

The only exception is for participating clubs. Participating clubs are requested to send their material no later than **FIVE DAYS** after the club's meeting. For example, if a club meets on the 4th of the month, the

Club Meetings



Due to space limitations, we cannot always carry the full listing of Wisconsin and area club meetings. Please see the

September 1996 meetings column for the latest complete listing. The following are additions or changes since that listing.

MILWAUKEE RADIO AMATEURS CLUB

Last Thursday evening, Redemption Lutheran Church, 4057 North Mayfair Road, Wauwatosa 53222. Meetings begin at 7:30 p.m. 12 months of the year.

The Test Point



Amateur Radio Examination Locations and Schedules in the Wisconsin Area

November 02, 1996	Waukesha, WI
	6.91 Hamfest
November 02, 1996	Manoronie, WI
November 02, 1996	Oshkosh (Omro), WI
November 02, 1996	Racine, WI
November 02, 1996	St. Paul, MN
November 02, 1996	Pewaukee, WI
November 03, 1996	Kaukauna, WI
	Fox Cities Swapfest
November 09, 1996	Blaine, MN
November 09, 1996	Bloomington, MN
November 09, 1996	Madison, WI
November 09, 1996	Marshfield, WI
November 09, 1996	Oak Creek, WI
November 14, 1996	Apple Valley, MN
November 16, 1996	Milwaukee (Badger)
November 16, 1996	Cottage Grove, MN
November 16, 1996	Loves Park, IL
November 19, 1996	Eden Prairie, MN
November 20, 1996	Milwaukee, WI (MRAC)
November 30, 1996	Onalaska, WI
November 30, 1996	Wauwatosa, WI (MRAC)
December 07, 1996	Oshkosh (Omro), WI
December 07, 1996	Racine, WI
December 07, 1996	St. Paul, MN
December 07, 1996	Pewaukee, WI
December 07, 1997	Stevens Point, WI
December 12, 1996	Apple Valley, MN
December 14, 1996	Blaine, MN
December 14, 1996	Bloomington, MN
December 14, 1996	Madison, WI
December 14, 1996	Oak Creek, WI
December 14, 1996	Marshfield, WI
December 17, 1996	Eden Prairie, MN
December 18, 1996	Milwaukee, WI (MRAC)
December 21, 1996	Milwaukee (Badger)
December 21, 1996	Cottage Grove, MN
December 21, 1996	Loves Park, IL
January 18, 1997	Milwaukee (Badger)
February 15, 1977	Milwaukee (Badger)
Monthly, 1st Sat.	Racine, WI
	(except January, July & August)
Monthly, 1st Sat.	Oshkosh (Omro), WI
Monthly, 1st Sat.	St. Paul, MN
Monthly, 2nd Thu.	Apple Valley, MN
Monthly, 2nd Sat.	Oak Creek, WI
Monthly, 2nd Sat.	Madison, WI
Monthly, 2nd Sat.	Bloomington, MN
Monthly, 2nd Sat.	Blaine, MN
Monthly, 3rd Tue.	Eden Prairie, MN
Monthly, 3rd Wed.	Milwaukee, WI (MRAC)
Monthly, 3rd Sat.	Loves Park, IL
Monthly, 3rd Sat.	Cottage Grove, MN

Monthly, Last Sat., Wauwatosa, WI (NRAC)
(except December) Monthly, Last Sat.,
Tomahawk, WI

(January thru October only)
Quarterly Marshfield, WI
(Second Saturday every third month.)

Many Swapfests/Hamfests offer exam sessions.
If not shown above contact the sponsoring club in the
Swapfest column on page 2

The FCC now requires applicants to show their
ORIGINAL AMATEUR LICENSE to the VEC. A copy of your
license must be attached to your FCC form 610. You
will also be required to have a photo ID, or other
acceptable identification.

GENERAL RULES

FOR MOST EXAMINATIONS:

Be sure to check with sponsors in the event
there are changes and/or errors in the dates or
information given.

Some examinations require filing an FCC Form
610 and advance registration at least 30 days before
the exam date. (Some VECs permit walk-ins. Check with
sponsor.)

To register, you must first secure a copy of the
current FCC Form 610 and fill it out completely (AND
CORRECTLY). Get your form from an FCC Field Office,
the ARRL. Send a 32c/ SASE if you request one from
the ARRL. In most cases, forms can also be obtained
from the sponsoring group.

ARRL/VEC examinations require a check for \$6.35
payable to "ARRL/VEC".

The FCC now requires applicants to show their
ORIGINAL AMATEUR LICENSE or CSCE to the VEC. You
must also have two good copies of your license or
CSCE. A copy of your license or CSCE must be attached
to your FCC form 610 and most VEC want a copy for
their records. You will also be required to have a
photo ID, or other acceptable identification.

Technician class licensees must show proof of
testing before March 21, 1997, in order to upgrade to
General with a code test only.

Additional information is given below.

MILWAUKEE RADIO AMATEURS' CLUB (MRAC/VEC) OAK CREEK, WI

SECOND SATURDAY DATE: 1:00 p.m. at Wauwatosa
Savings Bank, 6560 S. 27th St., Oak Creek, WI.

THIRD WEDNESDAY DATES: At 6:30 p.m. at Village
at Manor Park, (was Methodist Manor) 3023 S 84th St.,
(84th & Oklahoma) Milwaukee, WI.

LAST SATURDAY DATES: (except December): 9:00
a.m. at 7500 W. State St., Wauwatosa 531, lower
level, Wauwatosa, WI.

For Additional Information Contact: Jack
Krause, (414) 774-8999 or call (414) 466-HAMS
(Answering Machine) or write Milwaukee Radio
Amateurs Club, PO Box 23707, Milwaukee, WI 53225.

Bring along your ORIGINAL license, CSCE and two
(2) good quality photocopies, plus two forms of
identification, such a driver's license, etc. Also
required is \$5.00 for the exam fee. WALK-INS are
welcome. To register in advance, use a post card:
print the grade of license you are applying for, and
your name, address, and telephone number. Send the
card to MRAC/VEC, at the addresses shown above.

BADGER EXAMINERS (BE) - MILWAUKEE

Amateur exams: 1:00 p.m. to 4:00 p.m.
Commercial exams: 9:00 a.m. to 12:00 noon.

Unless otherwise noted at WMVS-TV studios, MATC
Downtown campus in the C building starting at 9:00
a.m. for commercial exams and Amateur exams at 1:00
p.m. the same day. The address is 1036 N. 8th Street,
Milwaukee. Enter at the North West entrance of C
Building. Walk-ins are welcome. To register in
advance, send a post card with your name, test or
tests you wish to take, date you wish to take, your
call sign, address and telephone number to Badger
Examiners, Gary J. Sharburo, WI9M, 5119 W. Willow
Rd., Brown Deer, WI 53223. Telephone (414) 355-0237.

Also available FCC General Radio Telephone
Commercial exams. Fees are \$5.00 for the Amateur
Radio exams and \$35.00 for the commercial exams.

MADISON, WI

VE exams are held in Madison every second
Saturday morning of the month at 8 a.m. They are held
at the operations building of the Madison
Metropolitan Sewerage District at 1610 Moorland Rd.
To get there take the Beltline (Hwy 12 & 18) to South
Towne Drive. Go south 8/10 mile till South Towne
Drive makes a bend and becomes Moorland Rd. and enter
at gate.

You should bring a picture ID, your original
license and a copy of your license. For exams beyond
the novice tests, bring a check for \$5.90, made out
to the ARRL/VEC. If the special 610 form with the
medical exemption is required, contact me
beforehand to obtain one. No appointments are
necessary to take exams. For further questions,
please leave a message on the mailbox or phone me at
(608) 832-6631.

Mark Jenks, N29B

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July
and August.

Monthly exams are given 9:00 to 11:00 a.m. at
the Red Cross Building, 4521 Taylor Avenue, Racine.
Walk-ins are permitted.

Talk in on 147.87/.27. Inquiries and
registrations should be directed to Robert W.
Jensen, W0WLN, 5816 Cambridge Lane #6, Racine, WI.
Telephone (414) 886-8551.

TOMAHAWK, WI

Last Saturday of every month, Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC)
Tomahawk, WI. No preregistration required, but
appointment would be appreciated. Registration at
8:30 a.m. and testings start at 9:00 a.m. For
location or other information, inquire on 145.43
MHz repeater or contact: Terry Collins, KB9AUP,
W6564 Highway 8, Tomahawk, WI 54487. Telephone (715)
453-4633.

APPLETON, WI - ARRL/VEC

MANITOWOC, WI (HAMFEST)

KAUKAUNA, WI (HAMFEST)

Conducted by the Fox Cities ARC VE team. All
test sessions in Appleton are held at James Madison
Jr. High, 2020 S. Carpenter Street. Candidates check
in between 8 and 9 a.m. with testing starting at 9
a.m. No walk-ins after 9 a.m. Contact George R. Croy,
W9WDP, 2113 Twin Willows Drive, Appleton, WI 54914.
(414) 730-3967, or Larry Siebers, KD9IA (414) 730-
0967.

KAUKAUNA WI (FOX CITIES HAMFEST) ARRL/VEC

Registration 8:00 a.m. to 9:00 a.m. No walk-ins
after 9:00 a.m. Bring original license plus (2)
copies and a photo ID. For more exam information
contact: Larry Siebers, KD9IA, (414) 757-1167.

FOND DU LAC, WI (ARRL/VEC)

Saturday, September 7, 1996 from 9:00 a.m. to
Noon at Community United Methodist Church, 701
Minnesota Ave., North Fond du Lac, WI. Contact: Doug
Schultz, (N9EZF) at (414) 922-3038.

MARSHFIELD, WI (ARRL/VEC)

Sponsored by the Marshfield Area ARS. Held at
St. Joseph Hospital, 611 St. Joseph Ave. On 9
November in the 1 West classroom located adjacent to
the Westwood Cafeteria on the main floor of the
hospital. Use the main entrance or any other
entrance and follow the signs to the cafeteria.
Registration starts at 8:30 a.m. with testing
starting at 9:00 a.m. Talk in on the 147.18
Marshfield repeater. Walk-ins welcome. Contact:
Walter Friant, WB0KIN, 2310 Wallonie Drive,
Marshfield, WI 54449 (715) 387-3870.

STEVENS POINT, WI (ARRL/VEC)

Held in room 107, of the UWSP Science Building,
on the corner of Fourth and Reserve Streets in
Stevens Point. Contact Joe Larson, N9JW evenings at
(715) 344-1182.

PEWAUKEE, WI

Kettle Moraine Exam Team. Held at the Pewaukee
WCTC Campus Science Building, Room 5101, 9:00 a.m.
to Noon. Contact Al Johnson, AA7CS. (414) 568-0836.
103357.3222@COMPUSERV.COM

REDGRANITE, WI (W5YI and ARRL VEC)

OUR TEST ARE NO LONGER MONTHLY. The Radio
Amateurs of Wisconsin (RAW) club of Redgranite will
hold their 1996 test sessions on October 19. These
are held at the Civic Center in Redgranite, 202 Pine
River Road, one block from Highway 21. Registration
at 0830 sharp, with testing at 0900 sharp. Bring two
forms of identification, \$6.50 per test, and two
copies of all original documents, CSCEs, Licenses,
etc. Breakfast is at the Curve Inn, on highway 21.
All are welcome. For further information, please
contact Mark Miller, AA9RC at 231-1662 or Terry
Witt, AA9BA at (414) 685-5018.

OSHKOSH (OMRO)

The Oshkosh VE Team will administer Amateur
Radio exams monthly on the first Saturday. Exams
will be given from 9 a.m. until noon at the Omro City
Hall. Registration begins at 8 a.m. Walk-ins OK.
Bring a good quality photocopy of your original
license. The first session will be through W5YI/VEC,
and then sessions will alternate between ARRL/VEC
and W5YI/VEC. For more information, please call Dick
Lemme, KB9FA, at (414) 235-0987, or write Dick at 826
Jefferson Street, Oshkosh, WI 54901.

ONALASKA, WI

Saturday, November 30th.

On behalf of the Riverland Amateur Radio Club's
VE team and Bill Wood, KE9XQ team Chairman, we
announce the amateur radio exam schedule for 1996.
The sessions will be held at 7 O'clock P.M. at the
Onalaska Community Center, 515 Quincy Street in
Onalaska WI.

The team is field-stocked, and walk-in

card-dates are welcome. The team does appreciate
advance registration, especially for license exams
for the General, Advanced, and Extra classes. We
will allow a retest on a time available basis,
provided a second exam fee is paid. We use multiple
choice format answers for the Morse Code exams.

For further information or to preregister for
an exam session, please call Bill Wood, KE9XQ at
(608) 788-8571. You may also contact Karl Simonson,
KB9EQI at (608) 526-9412 or via packet:
KB9EQI@449AW. EN43KM.WI.USA.NA

MEDFORD, WI (ARRL/VEC)

Saturday, October 12, 1996

Sponsored by the Taylor County Area Amateur
Radio Club. Testing for all classes Novice through
Extra. Registration starts at 8:30 a.m. with testing
starting at 9:00 a.m. Tests are held at the
conference room in the lower level of the Sheriff's
Annex to the Taylor County Courthouse, corner of 2nd
and Ogden Sts., Medford, WI. Take Ogden Street west
off Highway 13 to the Courthouse. Park in the lots on
the east or south sides of the Courthouse or on the
street. PLEASE use the entrance on the south side of
the Courthouse and watch for the signs. Talk-in on
the 147.15 (+600 KHz) repeater. Walk-ins welcome,
however, if you know you'll be attending, it would be
appreciated if you would call ahead. Contact: Tom
Hrdina, N9GEN, 2373 Willow Ave., Medford, WI 54451.
Telephone (715) 748-4034.

CEDARBURG, WI - ORC HAMFEST

EAU CLAIRE, WI - ECARC HAMFEST

GREEN BAY, WI - ARES HAMFEST

HAYWARD, WI - HAYWARD HAMFEST

KAUKAUNA, WI - SWAPFEST

MANITOWOC, WI, LAKESHORE HAMFEST

MARSHFIELD, WI - HAMFEST

OAK CREEK, WI - SMARC HAMFEST

RACINE, WI - RACINE HAMFEST

RHINELANDER, WI - NWARC SWAPFEST

ROCKFORD, IL - RARC HAMFEST

ROTHSCHILD, WI - WVRA HAMFEST

SOUTH MILWAUKEE, WI - SMARC HAMFEST

STEVENS POINT, WI - CWRA SWAPFEST

WAUKESHA, WI - KMRA SWAPFEST

WAUKESHA, WI - MIDWINTER SWAPFEST

DUBUQUE, IA - HAMFEST

See the Swapfest column for additional
information and contact persons.

DUBUQUE, IA - ARRL/VEC

Dubuque Hamfest. Contact: Carl Clark, NOKAX,
2145 Delicia Drive, Dubuque, IA 52001. (319) 557-
9149.

LOVES PARK, IL

Third Saturday of every month. Northern
Illinois Volunteer Examiners (W5YI VEC). Held at
North Suburban District Library, 6340 North Second
St. (Hwy. 251), Loves Park, IL. Contact: Dennis G.
Eksten, W9SS, (815) 877-6768.

MINNESOTA TEST INFORMATION

From the September 1996 edition of "The Ground
Wave", Saint Paul Radio Club.

Saint Paul Radio Club (SPRC)

Contact: Jay Bellows, K0QBE (612) 222-7253

Test Site: St. Paul Technical College

235 Marshall Ave.

St Paul, MN

TESTING: First Saturday of the month, 8:30 a.m.

Anoka Amateur Radio Club (AARC)

Contact: Art Mundy, W0FYX, (612) 571-7441

Test Site: Blaine City Hall

9150 Central Ave NE

Blaine, MN

TESTING: Second Saturday of the month, 9:00
a.m.

Bloomington Amateur Radio Club (BARC)

Contact: Dan Royer, KE0OR (612) 888-9756

Test Site: Creekside Community Center

98th & Penn Avenue S

Bloomington, MN

TESTING: Second Saturday of the month, 9:00
a.m.

Valley Amateur Radio Club (VARC)

Contact: Paul Ramey, W0GG (612) 432-1640

Test Site: Hayes Community Center

14601 Hayes Road

Apple Valley, MN

TESTING: Second Thursday of the month 7:00 p.m.

W5YI

Contact: Dave Ranney, N0AXL (612) 933-2182

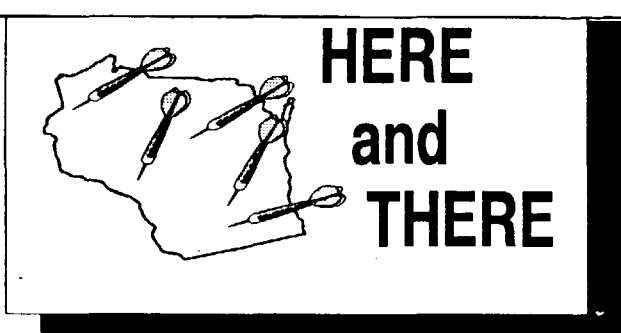
Test Site: Eden Prairie Library

479 Eden Prairie Drive

Eden Prairie, MN

TESTING: Third Tuesday of the month 6:30 p.m.

(continued on page 14)



Vanity call sign processing update

In the three weeks since Gate 2 opened on September 23, the FCC's Gettysburg, Pennsylvania, office, has worked its way about halfway through the stack of 4527 first-day applications. At this point, Commission personnel are only entering application data in preparation to grant applications, a process an FCC spokesman said would take approximately four weeks. No license grants have been made under Gate 2. Since most of the applications have included the maximum 25 call sign choices, keying each one into the computer has been a painstaking process. The FCC said it would ignore illegible choices in the list.

The FCC will not start making any grants for first-day filers until all day-one applications have been entered into the FCC's computer. Then, applications will be processed randomly by the computer from among those that arrived on September 23, 1996.

About 7% of Gate 2 applicants have been using the FCC's new on-line electronic filing system, available via the FCC's Web page at <http://gullfoss.fcc.gov/vanity.prod/vanity.htm>. Paper and electronic applications have equal weight in terms of processing, but electronic applications don't have to be manually transcribed into the FCC's computer. Electronic payment is not yet available.

If your application cannot be granted for any reason, the FCC will dismiss and return it. But to get your \$30 back, you must request a refund in writing. The FCC has not announced opening dates for Gates 3 and 4.

Vanity program applicants are advised to refrain from calling the FCC for the latest information on application processing and, instead, to check the latest vanity program information on the ARRL Web page at <http://www.arrl.org/fcc/vanity.html> or to listen to W1AW bulletins. The KI4HN Web page lists vanity assignments at <http://www.webbuild.com/~ki4hn/vanity.htm>. This address was still working on October 10, but KI4HN reports he's changing Web servers and the new address will be <http://www.mindspring.com/~ki4hn>. Another good source of the latest FCC grants is the CallBook Server (CBS) Summary at http://www.lantz.com/htbin/cbs_today. CBS lists all transactions that result in call sign changes.

The ARRL Letter, 10/11/96

President Clinton recognizes Amateur Radio

President Bill Clinton has sent greetings to Amateur Radio during the week leading up to the October 12-13 Simulated Emergency Test. The President's greeting refers to the week as "Amateur Radio Week." The White House faxed a copy of the president's message to ARRL member Darlana Mayo, KB2EPU, of Mt. Vernon, New York, who's been working with the White House for several months to get the acknowledgement. Mayo said she wanted the president to "be aware of our value to

Wisconsin Amateur Internet Addresses.

CALL	NAME	E-MAIL/WEB URL
KC2AK	Stas Wnukowski	Staskc2ak@aol.com http://users.aol.com/staskc2ak jcwiskow@win.bright.net aa9bj@excel.net wa9bqw@juno.com kb9byp@execpc.com n9clg@aol.com kf9cs@execpc.com http://www.execpc.com/~kf9cs menzelw@wctc.net http://www.wctc.net/~menzelw kb9dac@juno.com asplind@dgabby.mfldclin.edu n9eil@juno.com bnriemuth@execpc.com ley@uwstout.edu lemme@vbe.com ke4fe@newnorth.net nearer@centuryinter.net http://www.QTH.com/ka9fox jkline@centuryinter.net RREGEN@mhsgate.ci.mil.wi.us muzikman@waun.tdsnet.com ETHOLMEN@AOL.COM kingdr@uwec.edu garyk9gs@solaria.sol.net rkissell@execpc.com tcweeden@execpc.com deprknsn@execpc.com dgrotophorst@globaldialog.com rcv@execpc.com kingtw@uwec.edu shaman@vbe.com burgerb@execpc.com mwerner@waun.tdsnet.com dem@sal.wisc.edu k9jig@execpc.com nhar@execpc.com bahr@inxpress.net http://www.bahr.com kinger@overlord.edp.net jtaylor@videoterm.com wa9kfr@corenet.net bwitt@execpc.com mpagel@uwsp.edu jjhanso1@students.wisc.edu kinger@overlord.edp.net n9loo@execpc.com http://www.execpc.com/~n9loo fgoettl@excel.net sellington@ssec.wisc.edu ke9ma@juno.com wrupp@execpc.com http://www.execpc.com/~wrupp n9nqw@kb5ogn.ampr.org johnklein@itol.com n9oig@wi.net k9oqo@aol.com keithbel@execpc.com GREISINR@UWGB.EDU wrjones@mail.wiscnet.net wa9pov@execpc.com http://www.execpc.com/~wa9pov gw9pvd1@win.bright.net grgruetz@vms2.macc.wisc.edu mjfalk@omnifest.uwm.edu http://ods.ods.net/ketchup/index.htm n9rsu@edp.net JSUW61A@prodigy.com wvincent@execpc.com tcemlepc@waun.tdsnet.com n9unr@execpc.com jtenor@sparknet.net http://www.sparknet.net/~jtenor/gbasfg.html jcwiskow@win.bright.net k9vso@itis.com deanjeski@aol.com wernerg@dgabby.mfldclin.edu LesW9YCV@aol.com bshafer@overlord.edp.net jklein@peoples.net liljim@badger.tds.net smokesigs@baraboo.com http://www.danenet.wicip.org/~ares http://www.execpc.com/~kf9cs/ecr.htm mceraso@mail.edp.net http://www.edp.net/~mceraso/ECARC.html http://www.uwec.edu/Academic/Outreach/Morse2000/morse2000.html http://discover-net.net/~tazman/rcrainfo/rcrainfo.html http://www.nconnect.net/~wcarc wa9pov@execpc.com http://www.execpc.com/~wa9pov/warac.html nhar@execpc.com http://web.gmttech.com/~war
AA9BB	Jim Wiskow	
AA9BJ	Tom Hetzel	
WA9BQW	Jule Kish	
KB9BYP	Jeff Schmeichel	
N9CLG	Ed Pliner	
KF9CS	Mark Heimmermann (WAR Secretary)	
KA9D	William G. Menzel	
KB9DAC	Kevin King	
N9DXZ	Dave Asplin	
N9EIL	Debra Kroll	
KB9ENO	Bill Niemuth (WAR Vice Chair.)	
NX9F	Jim Ley	
KB9FA	Dick Lemme	
KE4FE	Gary Day	
KA9FOX	Scott Neader	
KA9GCW	Jim Kline	
K9GDF	Rich Regent	
N9GHZ	Mike Schoenfuss	
N9GJJ	Eugene Tetzlaff	
N9GLG	Debby King	
K9GS	Gary Schwartz (Greater Milw DX Assn)	
WB9GYT	Rick Kissell	
WJ9H	Tom Weeden	
KB9HAM	Don Parkinson	
KA9HKL	Duane Grotophorst	
WD9HOD	Ray Vollrath (WAR Editor)	
WF9I	Tom King	
KG9IA	Bob Jones	
WB9IJY	Bob Burgermeister	
KB9IQL	Marty Werner	
W9IXG	Don Michalski	
K9JIG	Denis Christopherson	
WA9JOB	Nels Harvey (WAR Chairman)	
KB9JQS	Dennis E. Bahr	
N9JRC	Adam G. King	
K9JT	Jim Taylor	
WA9KFR	Walter Stasiowski	
N9KY	Bill Witt	
KA9LAQ	Mike Pagel	
N9LEA	Jason Hanson	
N9LHX	Seth T. King	
N9LOO	Brian Skrentny	
AA9LV	Francis A. Goettl, Jr.	
K9MA	Scott Ellington	
KE9MA	Gene Kroll	
N0MKJ	Bill Rupp (Milw. Foxhunt Club)	
N9NQW	Jeff Seefeldt	
K9OGT	John Klein, Jr.	
N9OIG	Kevin Drissel	
K9OQO	Jim Sheetz (WAR Treasurer)	
N9PBA	Keith Belongia	
W9PHF	Ray Greisinger	
N9PHS	Wes Jones	
WA9POV	Dave Knaus	
W9PVD	Gordon Lauder	
WB9QBA	George Gruetzmacher	
AA9RK	Mike Falk	
N9RSU	Leroy A. Dick, Sr.	
K9RTB	Bob Klein	
N9TNW	Bill Vincent	
N9UBQ	Roland Sacho	
N9UNR	Dave Barrow (WAR Freq. Coord.)	
N9UPU	Joe Tenor	
N9UXG	Sue Wiskow	
K9VSO	Jim Breszee	
AD9W	Dean Andrewjeski	
W9YCV	Gerald Werner	
N9YJJ	Lester Peterson	
W9YOA	Bruce Schaffer	
N9ZLU	Jack Klein	
K9ZZ	Jim Bailly	
	Jim Romelfanger	
	Dane Co. ARES	
	ECResources, Ltd.	
	Eau Claire Amateur Radio Club	
	Morse 2000 Project	
	Red Cedar Repeater Association	
	Washington County ARC	
	West Allis Radio Amateur Club	
	Wisconsin Association of Repeaters	

Updated 10/08/96 - Complete listing

Note that e-mail addresses and Web URLs may be case sensitive.

Send additions and changes to wa9pov@execpc.com.

This list is also available at www.execpc.com/~wa9pov/bsslist.html.

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Silent Keys

NORMAN J. GADE, K9ELK, 83, of Reedsburg, died September 29, 1996. He was a charter member of the Yellow Thunder Amateur Radio Club.

ROBERT O. MAYER, W9KLN, became a Silent Key on October 10, 1996, at the age of 79 from a heart attack. Mary Louise, his wife, said that on that day he was very excited about the mobile radio equipment that he just had installed. Bob walked one block from his home to his parked car at an automotive service center and was in the car operating the equipment when he began getting chest pains. He never returned home.

Bob worked in Radio Broadcasting for thirty years at WFOJ, WTMJ and WNOV in the Milwaukee area. He was an active traffic handler and for years was STM (K9FHI has my records of exact dates) in Wisconsin. Bob was well known to the folks at the Milwaukee Radio Amateurs' Club and The West Allis Radio Amateur Club. W9KLN was enjoying the thrills of Amateur Radio when he left us, he will be missed.

Richard Regent, K9GDF

the community -- particularly in emergencies." Mayo -- a ham for 10 years -- is a member of ARES and RACES, and serves as an assistant director and an assistant emergency coordinator in the Hudson Division.

Here's the text of the White House statement, which was signed by President Clinton:

Warm greetings to everyone observing October 7 through 13, 1996, as Amateur Radio Week.

In the past century, the medium of radio has changed the way we live and the way we view our world, and Amateur Radio operators have played a vital role in this communications phenomenon. Sharing knowledge and technological expertise, connecting computers via radio equipment, and linking people all across the globe, ham radio operators have helped to make our world a true global village. But even more important, they have provided a crucial lifeline of relief in times of disaster and hardship, ensuring that hope and help are on the way to those in need.

Amateur Radio Week offers us a welcome opportunity to thank our nation's Amateur Radio operators for their commitment to excellence and their willingness to work for the well-being of others.

Best wishes for a wonderful week.

The ARRL Letter, 10/11/96

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FEMA to FCC: No sharing of 2 meters and 70cm

The Federal Emergency Management Agency, better known as FEMA, is saying no to sharing or reallocating the 2 meters and 70 centimeter ham bands to Low Earth Orbiting Satellites. In a letter to the FCC task force currently evaluating new spectrum for use by LEO satellites, FEMA Manager Paul Reed, tells the committee that his agency opposes any such change.

Reed says that Amateur Radio operators have a history of supporting state and local government emergency operations by providing needed communications. He says that many local communities served by ham radio have extremely limited resources and would be without any form of back-up communications without Amateur Radio.

Reed says that FEMA has been in contact with its state and local emergency management partners across the nation. That it is their belief that authorizing access to the mobile satellite service in the 2 meter and 70 centimeter bands will seriously degrade the ability of these groups to support their public service requirements.

The FEMA Manager ends his letter by strongly urging the FCC task force to remove both of these ham bands from any further consideration as a new home for Low Earth Orbiting Satellites. He says to leave them for use by ham radio and its emergency service partners, nationwide.

As posted on the Milwaukee Area Skywarn Association B-B-S. 414-229-6664 (U.W.M. Omnifest).

<http://www.uwm.edu/dept/omnifest>

LOGIN: visitor (lowercase)

@MENUS: go skywarn

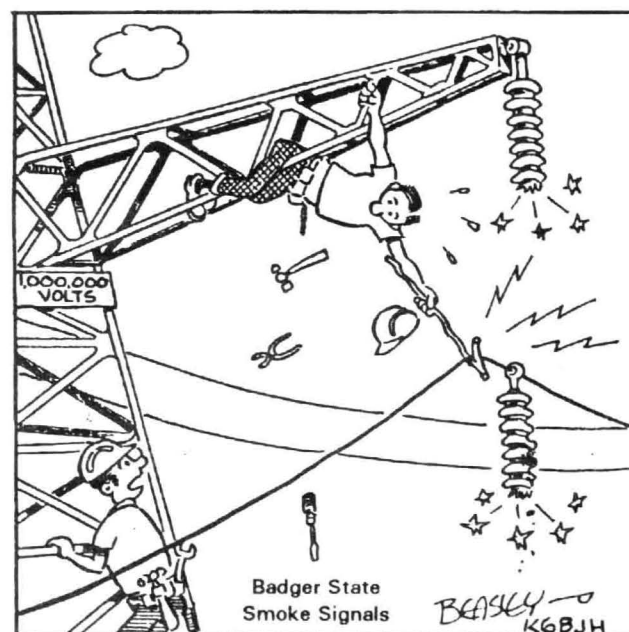
Lost: science & technology area

Skip Voros/WD9HAS

Amateur Radio Newsline #1000, 11 October 1996

On the Lighter Side

By Bob Beasley, K6BJH



Ham goes to Extra Class at 90+

Bob Baird, W9NN, a very active member of the Central Wisconsin Radio Amateurs at UW-Stevens Point, proved again that it's never too late when he passed his Amateur Extra Class exam at 90-plus years of age in the spring of this year.

Please accept our congratulations, Bob. You are a credit to those who look to the future and to those who confront and meet a challenge without excuses. In other words, "You done good!"

The BSSS staff:

K9EN, WB9UQT, WA9POV, K9JYX, and K9ZZ

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form below.

Arne, KA9ZPY, visits native Sweden

Last summer, Arne Moxness, KA9ZPY, Racine, visited Sweden to meet and visit with relative and fellow radio amateurs. One of the highlights was a visit with Anders, SM4-AWF, and his XYL, Agneta. The Anders' had invited Arne and his XYL, Britt-Marie, N9-ZWG, to their charming log house in the province of Dalarna, the birthplace of the Kingdom of Sweden around the year 1500 A.D. Anders is a dentist. He operates mostly CW. Just by luck, a few years ago he ran across Arne on the 20-meter band. One common thread is that Anders married a gal who, in high school, was in the same age group as Arne's late brother, Per, and who knew him and his friends. Because of that, Arne and the Swedish couple have had many QSOs and a LOT of correspondence. Here, Arne, KA9ZPY (standing), visits Anders, SM4AWF in his shack. Anders had been using only CW.. until he ran across Arne, who speaks Swedish. They enjoy chatting on the air in their native language.

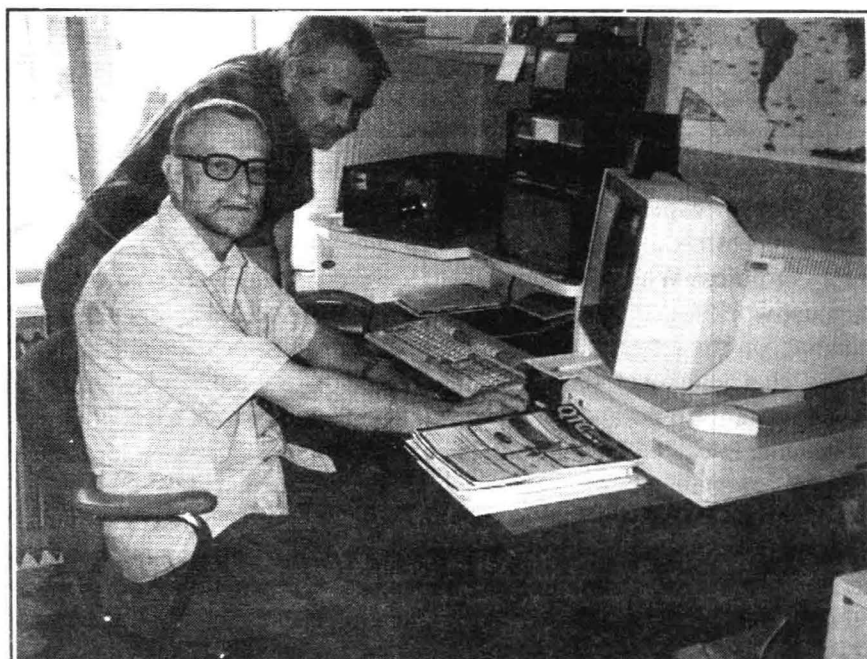


Photo and story by Arne Moxness/KA9ZPY

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November 1996

The Computer Corner

By Stan Kaplan, WB9RQR

105 Martin Drive

Port Washington, WI 53074-9654

(414) 284-2346

WB9RQR @ N9PBY EN6381 WI USA NA

SKAPLAN @ POST.ITS.MCW.EDU

No. 36: SPEED #1: THE DATA BUS

This is another topic suggested by Tom, WB9LNL. He said, "Write an article on speed." Wow, did he ever open a can of complicated worms! The speed of a computer depends on so many things, it is really difficult to write a single article on the topic, unless it just relates that a pentium is usually faster than a 486 which is usually faster than a 386 which is usually faster than a 286 which is usually faster than an XT. Usually, but not necessarily always. So, let's explore the topic starting at the beginning, and we'll have to spread it over a couple of articles.

First, we must consider how data moves around in a computer. The central processing unit chip (CPU) in a computer has to "talk" with other parts of the computer. To do this, it sends and receives data using a bundle of wires called the data bus. An 8088 (XT) has 8 wires in the bundle, and is said to have a data bus width of 8 bits. You may recall from previous articles that 8 bits = 1 byte; the letter A can be represented by 8 bits (or 1 byte), as can the letter a. So, think of it this way. An XT CPU can send a single letter or number to some other site in the computer all at once, by sending data down all 8 wires simultaneously. Actually, the CPU does this by raising the voltage on some wires to +5 VDC (which represents a one) and leaving others at 0 volts (which represents a zero). The pattern of ones and zeros in the 8 wires at a given moment might represent the letter a. I can even write it for you. The lowercase letter a is 01100001, where 0 is a wire with no voltage on it and 1 is a wire with a charge of +5 volts.

As you might suspect, a 286 can do better. The CPU in a 286 computer has a data bus width double the size of the XT - 16 bits. The 286 chip can send out two letters simultaneously, so in any task that requires it to send out many letters, it will be faster than an XT.

Both the 386 and 486 CPUs sport 32 bit data busses, making them even faster than the 286. Finally, most Pentium CPUs have a 64 bit bus width. All this is summarized in the table below, along with a few other interesting facts about each of these chip models.

CPU	DATA BUS WIDTH	NUMBER OF TRANSISTORS	YEAR INTRODUCED
8088 (XT)	8	29,000	1979
286	16	134,000	1982
386DX	32	275,000	1985
486DX	32	1,200,000	1989
Pentium 66	64	3,100,000	1993

Let me construct a 'ham style' analogy to bring the point home. Suppose we have a communications center. There are 8 CW operators in the room, sitting at 8 keys, each of which is connected to some remote site by 8 wires (connected by a common return or ground wire, which we won't consider). At the remote site are 8 light bulbs. When the CW ops in the comm center are told to send a letter, they must work together to send it. Each must close his key or not close his key, depending on the letter to be sent. The pattern of on or off light bulbs at remote site tell what letter was sent. If the 8 light show the pattern 01100001, where 0 indicates an unlit bulb and 1 indicates a lit bulb, the lower case letter a was sent. That is an XT.

In the communications center of the 286, there are 16 CW operators, 16 keys and 16 wires. These ops can send not just one, but two letters simultaneously. While the XT ops might send just the letter H, the 286 ops might send the two letters HI, simultaneously, because there are 16 light bulbs on the wall at the receiving end, connected by 16 wires, not just 8. The 386 and 486 ops can send HI OM because there are 32 lights on the wall, each letter requiring the use of 8. And the Pentium ops can send HI OM ES 73, 8 characters all at once, because there are 64 light bulbs at the receiving end, energized back in the comm center by 64 ops at keys, over a bus of 64 wires.

That is the concept of a data bus. Clearly, the newer a CPU model is, the more complicated (and capable) is its data bus. A wider bus is more efficient because more data can be moved down it at one time. On the other hand, a wider data bus means a more complicated chip, which is part of the reason for the increase in number of transistors shown in the table above. Does that completely explain the differences in speed? Nope. Far from it. More next time. Happy computing!

Reprinted, by permission, from the ORC Newsletter, Ozaukee Radio Club, P.O. Box 13, Port Washington, Wisconsin 53074 (Skip Douglas, KA9DDN, Editor). □

Amateurs in "Mission X" Classroom

By C. L. Thomas, N9FVA

E5279 750th Avenue

Menomonie, WI 54751



The "shuttle vehicle" (a modified school bus), its crew at right, and at left, Mayor Stokke and Senator Clausing. Below is the interior of the "shuttle" as viewed by N9FVA and his student radio operator.

Photos courtesy C. L. Thomas, N9FVA



In the name of Aerospace Education, an Eau Claire High School class had converted a standard school bus into what closely resembled a NASA Shuttle vehicle. The nose was fashioned from fiberglass, the interior was designed with "positions" for a number of 6th grade "astronauts", and as the accompanying photo shows: rocket nozzles and wings (that folded during times the bus was on the road) were attached to create this quite realistic-looking Shuttle.

Elementary students learned just how many thousands of persons are involved in such "launches" -- that a myriad of skills/technicians are required to make such Shuttle launches possible. Teachers made a special effort to coordinate their classroom subjects with the aerospace program.

The physics, mathematics, technology, chemistry, geography, and several other courses each had their opportunity to demonstrate their relationship with the exploration of space.

State Senator Alice Clausing, as well as Menomonie Mayor Charles Stokke spoke at the large gathering of students, teachers and guests at the time of the "launch" from the school grounds. Amateur Radio was represented there also: Ken Drake (K9IAG), Don Lund (K0DL), Chuck Thomas (N9FVA), and Perry Young (N9NOY) helped with the necessary communications between the "Shuttle Vehicle" and "Mission Control." Two meters worked out quite well as selected students spoke in the customary "space travelers' jargon" while licensed amateurs were at their elbows.

CO2 was released from the nozzles -- wings folded -- and the "Shuttle" took off from the school grounds enroute to a local park. Students took soil samples, established their longitude and latitude positions, took blood pressures, etc. -- all a part of the mission assignment. It was a great learning experience for all of us! □

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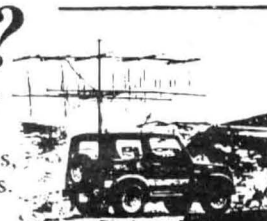
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Wisconsin Repeater Directory



Courtesy of the Wisconsin Association of Repeaters

The WISCONSIN ASSOCIATION OF REPEATERS is an organization of trustees and representatives of repeaters, state-wide, whose goal is mutual cooperation on the VHF UHF spectrum, in the voluntary spirit of Amateur Radio.

GENERAL FREQUENCY COORDINATION POLICIES

1. We attempt to place no two repeaters on the same pair closer than 120 miles.
2. We attempt to place no repeater on a 15 kHz split pair closer than 40 miles to any adjacent 30 kHz standard spacing machine.
3. We not only assist proposed repeaters in finding a frequency where possible, but we actively attempt to protect coordinated repeaters frequencies from interference whenever possible.
4. W.A.R. has suggested band plans for most of the FM spectrum, a subaudible tone plan for the State of Wisconsin and all necessary information for coordination of new or modifications to existing repeaters.

Contact the Frequency Coordinator:

David Barrow, N9UNR, Wisconsin Association of Repeaters, 1894 Elm Drive, West Bend, WI 53095-9603.

Packet: N9UNR @ N9PBY.EN63BI.WI.USA.NA

E-mail: n9unr@execpc.com

Telephone: (414) 375-2667

Key

O Carrier Access	PL Sub-Audible Continuous Tone
T Touchtone	C Closed Private Repeater
A Autopatch	(CA) Closed Private Autopatch
E Emergency Power	L Link and/or Crossband
P Portable	R RACES Affiliated
Z Autopatch to Law Enforcement	X Wide Area Coverage

Wisconsin Sub-Audible Tone Plan By Region

North Central - 2A, 114.8 Hz

North East - 1B, 107.2 Hz

North West - 2Z, 110.9 Hz

South Central - 3Z, 123.0 Hz

South East - 3A, 127.3 Hz

South West - 3B, 131.8 Hz

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Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
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ALGOMA	NE	146.805	WB9RJB/R	O PL107.2			WB9RJB	04/07/95
ALLENTON	SE	442.350	N9GMT/R	O PL114.8 A EZ L X			FM38	09/11/95
ANTIGO	NC	145.310	KD9HH/R	O A E Z		*	KD9HH	05/22/96
APPLETON	NE	145.150	WD9FLJ/R	O PL107.2 CA EZAR			O CO REDX	10/10/95
APPLETON	NE	145.330	WD9FLJ/R	O PL107.2			F V VHF A	01/15/95
APPLETON	NE	146.655	KB9ENO/R	O PL107.2 A E			ECR LTD	08/07/95
APPLETON	NE	146.760	K9OQO/R	O PL100.0 E X R			F V VHF A	01/15/95
APPLETON	NE	147.195	N9PAO/R	O PL107.2			VRG	04/07/95
APPLETON	NE	442.125	WX9C/R	O PL100.0		*	WX9C	01/01/96
APPLETON	NE	443.650	W9IE1/R	O			F V VHF	01/15/95
ASHLAND	NW	52.950	KB9AMY/R	O CA E L X Z R		*	KB9AMY	03/29/96
ASHLAND	NW	145.350	KB9AMY/R	O CA E L X Z R		*	KB9AMY	03/29/96
ASHLAND	NW	442.350	KB9AMY/R	O CA E L X Z R		*	KB9AMY	03/29/96
ASHWAUBENON	NE	443.500	KB9AMM/R	O CA E			TEARUG	03/20/95
BARABOO	SC	145.310	N9KXX/R	O PL123.0			N9KXX	04/07/95
BARABOO	SC	146.880	K9YXW/R	O PL123.0 DS E WX*			C.W.R.A.	07/10/96
BARABOO	SC	147.315	N9QIP/R	C E X L WIN PL10			N9QIP/WIN	07/24/95
BARABOO	SC	224.660	KE9KX/R	O TT-200 IF QRM		*	KE9KX	01/23/96
BARABOO	SC	442.950	KE9KX/R	O PL123.0 E X		*	DRAKE R.C	01/23/96
BARABOO	SC	443.900	N9FBF/R	O PL114.8 ZXL DS			FM38	09/11/95
BARABOO	SC	444.250	N9KXX/R	O PL123.0			BSRG	04/16/95
BAYFIELD	NW	146.610	W9BCY/R	O CA		*	NLAND ARC	05/30/96
BELDENVILLE	NW	147.225	WB9WOT/R	O PL110.9 A E L		*	B.A.T.S.	06/10/96
BELDENVILLE	NW	224.840	WB9WOT/R	O PL110.9 A E L		*	B.A.T.S.	06/10/96
BELDENVILLE	NW	443.225	WB9WOT/R	O PL110.9 A E L		*	B.A.T.S.	06/10/96
BELOIT	SC	146.670	WA9JTX/R	O PL123.0 E R		*	BELOIT AR	03/29/96
BELOIT	SC	224.300	N9BUL/R	O CA TT		*	C.B.S. RG	04/08/96
BERLIN	SC	145.210	N9PAA/R	O		*	N9PAA	04/11/96
BERLIN	SC	443.850	N9AOZ/R	O PL123.0 A E X		*	N9AOZ	04/02/96
BLUFF SIDING	SW	146.835	WB9BDI/R	O		*	WINON ARC	01/01/96
BURLINGTON	SE	146.745	WB9CAS/R	O PL127.3 E		*	WB9CAS	03/19/96
BURLINGTON	SE	224.060	N9BBQ/R	O A E L X WX Z		*	SEWERS	03/19/96
CALEDONIA	SE	442.500	WA9KVE/R	O		*	WA9KVE	03/18/96
CAMERON	NW	146.715	WB9PRI/R	O PL103.5 E WX		*	WB9PRI	09/18/95
CAMERON	NW	443.650	N9KOR/R	O PL110.9 E		*	N9KOR	05/22/96
CEDARBURG	SE	146.970	W9CQO/R	O PL127.3 CA E X Z*			O.R.C.	03/10/96
CEDARBURG	SE	442.100	KA9QLP/R	O PL127.3 E		*	CFD/WERA	07/01/96
CHIPPEWA FALLS	NW	147.375	WD9HFT/R	O PL110.9 CA DS EX*			WD9HFT	03/29/96
CHIPPEWA FALLS	NW	442.300	WD9HFT/R	O PL110.9 DS E		*	WD9HFT	03/29/96
CLEVELAND	NE	444.175	KF9SJ/R	O PL107.2 CA ELWX*			KF9SJ	03/29/96
CRIVITZ	NC	145.470	KF9GQ	O PL107.2 TT		*	ATHELSTAN	03/29/96
CUDAHY	SE	224.900	NK9G/R	O A TT L Z		*	NK9G	06/10/96
DELAFIELD	SE	146.820	KE9QP/R	O PL127.3 CA EX Z			SEWFARS	05/28/95
DELAFIELD	SE	444.125	KE9QP/R	O PL114.8 E			SEWFARS	05/28/95
EAGLE RIVER	NC	145.390	KD9PT/R	O CA DS E Z		*	KD9PT	06/10/96
EAGLE RIVER	NC	444.400	KA9UCE/R	O PL114.8 AEXZ AR		*	E.S.R.G.	01/01/96
EAU CLAIRE	NW	146.910	K9UXP/R	O A TT E X WX		*	E.C.ARC	03/29/96
EAU CLAIRE	NW	147.240	W9JR/R	O A TT E		*	E.C.ARC	03/29/96
EAU CLAIRE	NW	443.300	KB9R/R	O E		*	KB9R/R	03/19/96
EAU CLAIRE	NW	444.925	N9RSU/R	O PL67.0 L		*	N9RSU/R	03/29/96
ELKHORN	SE	146.865	KB9LBR/R	O CA TT E A			LAARC	10/01/95
FITCHBURG	SC	444.000	KA9VDU/R	O PL114.8 L X WX		*	BURG	06/10/96
FOND DU LAC	NE	145.430	K9QYC/R	O PL127.3 CA		*	Fdl AR	05/22/96
FOND DU LAC	NE	147.090	WD9ESH/R	O PL107.2 CA E R		*	Fdl. RPT	07/26/94
FOND DU LAC	NE	223.900	WA4COY/R	O B CA			WA4COY	03/28/95
FOND DU LAC	NE	444.150	WA4COY/R	O PL107.2 B A			WA4COY	03/28/95
FORT ATKINSON	SC	53.090	AA9AD/R	O PL103.5 LXW RA		*	S.W.R.G.	03/29/96
FORT ATKINSON	SC	145.490	WB9EMR/R	O A TT E L A WX Z		*	TCARC	05/01/96
FORT ATKINSON	SC	224.420	N9DIT/R	O A TT E L A WX Z		*	FT AT RG	05/01/96
FORT ATKINSON	SC	442.750	N9DIT/R	O PL123.0		*	FT AT RG	08/01/96
FRANKSVILLE	SE	223.800	KC9NG/R	O PL127.3		*	KC9NG	03/19/96
GERMANTOWN	SE	224.180	W9CQO/R	O E		*	O.R.C.	03/10/96
GERMANTOWN	SE	444.525	WD9IEV/R	O PL114.8			WD9IEV	03/20/95
GILLINGHAM	SC	147.120	K9DB/R	O			K9DB	08/01/94
GRANTON	NC	146.775	W9FPE/R	O E A		*	W9FPE	03/29/96
GREEN BAY	NE	147.075	N9PAW/R	O PL107.2 E DS			AHSTC	04/07/95
GREEN BAY	NE	147.120	K9GB/R	O PL107.2 CADSEXZ*		*	G B M&K	06/19/96
GREEN BAY	NE	147.270	KB9ALN/R	O PL107.2 L145.1			NEW RL	01/15/95
GREEN BAY	NE	147.360	K9EAM/R	O A Z		*	G B M&K	03/28/95
GREEN BAY	NE	223.940	KB9DSV/R	O E		*	KB9DSV	01/04/96
GREEN BAY	NE	224.140	KZ9O/R	O PL107.2 A E L Z		*	RADACTV	03/18/96
GREEN BAY	NE	443.750	N9IE/R	O L146.685			RRU	01/15/95
GREEN BAY	NE	444.775	K9EAM/R	O CA E Z X		*	G B M&K	06/19/96
GREEN LAKE	SC	146.955	KB9WC/R	O E X A WX		*	G FOX ARC	01/01/96
GREEN LAKE	SC	444.400	KB9WC/R	O E X A WX		*	G FOX ARC	01/01/96
GREENDALE	SE	1282.500	KD9Y/R	O		*	KD9Y	06/10/96
HALES CORNERS	SE	145.170	W9FK/R	O PL127.3			WARAC	07/18/95
HARTFORD	SE	53.010	K9MLD/R	O PL103.5			K9MLD	05/28/95
HAYWARD	NW	147.255	W9NNS/R	O PL110.9AEZLX A/R*			NVWA	03/29/96
HAYWARD	NW	444.850	N9EGE/R	O			N9EGE	03/20/95

Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
HILBERT	NE	53.170	KN9P/R	O			KA9OJN	10/03/95
HILBERT	NE	146.895	N9OBG/R	O	PL146.2/151.4	*	N9OBG	01/22/96
HIXTON	SW	146.940	KC9YE/R	O	X A	*	T-J RA	05/22/96
HOLCOMBE	NW	52.810	N9LIE/R	O	PL110.9 E X	*	N9LIE	03/29/96
HOLCOMBE	NW	145.470	N9LIE/R	O	PL110.9 E L X	*	N9LIE	03/29/96
HOLCOMBE	NW	147.345	N9QWH/R	O	L PRK FLS&HYWR		N9QWH	06/18/95
HOLCOMBE	NW	444.525	N9LIE/R	O	PL110.9 E L X	*	N9LIE	03/29/96
HOLCOMBE	NW	444.625	N9QWH/R	O	PL110.9 AZXARWx		N9QWH	10/04/95
HOLLANDALE	SC	146.655	KB9AKM/R	O	PL123.0		ICATS	06/10/95
HOLLANDALE	SC	444.550	N9QIP/R	C	RB WIN PL100		N9QIP/WIN	07/24/95
HUBERTUS	SE	145.250	KA9HLP/R	O	PL127.3 X WX R	*	HELPCOMM	05/29/96
HUDSON	NW	145.130	W9AVX/R	O	CA R E		SCC RACES	06/18/95
HUDSON	NW	146.955	K9LAV/R	O	TT0287 TTOFF128*		K9LAV	03/19/96
IOLA	NC	444.650	N9NOI/R	O	PL114.8 CA	*	N9NOI	03/18/96
IRMA	NC	146.730	K9GTQ/R	O			K9GTQ	06/18/95
IRMA	NC	146.970	KC9NW/R	O	PL71.9 CA EZ911X*		KC9NW	01/01/96
IRON RIVER	NW	147.270	W9KMT/R	O	PL114.8 E		W9KMT	12/19/94
JANESVILLE	SC	145.450	W9ACY/R	O			R.A.T.S.	05/28/95
JANESVILLE	SC	147.075	KB9YC/R	O	PL123.0 A	*	KB9YC	06/10/96
JUNEAU	SC	146.640	WB9ADB/R	O	PL123.0 AELWXZAR*		ROCK R RC	03/18/96
KAUKAUNA	NE	444.450	ND9Z/R	O	PL107.2 CA TT	*	ND9Z	03/18/96
KEMPSTER	NE	53.010	K9MLD/R	O	PL103.5		K9MLD	03/20/95
KENOSHA	SE	224.800	WB9LST/R	O	PL114.8 A LXZA	*	K.A.R.S.	03/29/96
KENOSHA	SE	442.125	N9OIG/R	O	PL114.8 A DS L X*		N9OIG	04/19/96
LA CROSSE	SW	146.700	WA9HCZ/R	O	RTTY 2125MARK	*	WA9HCZ	03/19/96
LA CROSSE	SW	146.760	K9CUT/R	O	TT X	*	LaCrossRA	03/29/96
LA CROSSE	SW	146.970	K9JYB/R	O	A E X Z WX RA	*	RVRLNDARC	03/29/96
LA CROSSE	SW	147.090	N9ETD/R	O		*	N9ETD	03/19/96
LA CROSSE	SW	444.600	WA9HCZ/R	O		*	ONA ARC	03/19/96
LA VALLE	SC	442.400	W9EBF/R	O	PL123.0 E P	*	W9EBF	04/16/96
LAC DU FLAMBEAU	NC	146.670	N9AFN/R	O	PL107.2	*	N9AFN	03/19/96
LAC DU FLAMBEAU	NC	146.700	W9BTN/R	O	PL114.8 E	*	W9BTN	03/18/96
LODI	SC	147.225	K9EY/R	O	PL123.0 A E	*	K9EY	03/19/96
LUXEMBURG	NE	443.700	N9DKH/R	O	PL107.2 E	*	N9DKH	03/19/96
MADISON	SC	53.070	N9KAN/R	O	PL103.5 CA ELZRA*		S.W.R.G.	03/29/96
MADISON	SC	146.685	W9YT/R	O	PL107.2 E		UW BARS	04/07/95
MADISON	SC	146.760	WB9AER/R	O	PL123.0 CA DSEXZ*		M A R A	03/29/96
MADISON	SC	146.940	N9KAN/R	O	PL123.0 DS Wx	*	C W R A	07/10/96
MADISON	SC	147.150	WB9AER/R	O	PL123.0 CA DSEXZ*		M A R A	03/29/96
MADISON	SC	224.160	WB9RSQ/R	O	PL123.0 A E L Z	*	WB9RSQ	06/10/96
MADISON	SC	443.400	N9KAN/R	O	PL123.0 CA ELXZA*		S.W.R.G.	03/29/96
MADISON	SC	444.500	WB9TAE/R	O	PL123.0 CA DS EL*		WB9TAE	06/10/96
MADISON	SC	444.775	NG9V/R	O	PL114.8 DS Wx	*	NG9V	07/10/96
MADISON	SC	444.925	WB9TAE/R	O	PL123.0 CA DS EL*		WB9TAE	06/10/96
MANITOWOC	NE	145.190	WB9MFB/R	O	PL107.2		WB9MFB	06/18/95
MANITOWOC	NE	146.610	W9DK/R	O	PL107.2CA EZRAWx*		MANCORAD	06/10/96
MANITOWOC	NE	147.030	N9GHE/R	O	PL110.9 A Z R	*	N9GHE	03/18/96
MANITOWOC	NE	224.540	N9GHE/R	O	R	*	N9GHE	03/18/96
MANITOWOC	NE	443.975	N9GHE/R	O	A R	*	N9GHE	03/18/96
MARSHFIELD	NC	145.490	W9FYP/R	O	E	*	W9FYP	03/19/96
MARSHFIELD	NC	147.180	AA9BN/R	O	A E Z L444.975	*	MAARS	01/14/96
MARSHFIELD	NC	444.975	AA9BN/R	O	F L147.18	*	MAARS	01/14/96
MAUSTON	NC	146.850	N9FVP/R	O	E	*	ARC OF CW	05/22/96
MEDFORD	NC	147.150	W9QHI/R	O	A E Wx		TAYLOR	06/18/95
MENOMONEE FALLS	SE	444.425	KA9FIN/R	O		*	SHRINE	03/18/96
MENOMONIE	NW	146.610	WB9YMB/R	O	A E L X Z A	*	R CDR RA	03/29/96
MENOMONIE	NW	146.805	N9HNI/R	O	CA *911 #DOWN		N9HNI	11/12/95
MENOMONIE	NW	443.575	N9KIP/R	O			N9KIP	04/10/94
MEQUON	SE	443.750	WA9POV/R	O	PL114.8		WA9POV	07/18/95
MERRILL	NC	145.450	KB9DZG/R	O			KB9DZG	12/17/94
METEOR HILL	NW	53.150	N9QWH/R	O	USE -1 MHZ NOW		N9QWH	06/18/95
MILTON	SC	146.715	K9RIJ/R	O	A TT E	*	K9RIJ	03/29/96
MILTON	SC	443.175	K9RIJ/R	O	A E	*	K9RIJ	03/29/96
MILWAUKEE	SE	29.620	WB9ZRB/R	O	PL127.3		IND RP SY	07/03/95
MILWAUKEE	SE	29.680	N9BBG/R	O	PL127.3	*	W.E.R.A.	01/10/96
MILWAUKEE	SE	52.990	N9PPX/R	O	PL103.5 CA Z DS		N9PPX	10/09/95
MILWAUKEE	SE	53.030	WB9TRO/R	O	PL103.5 E L	*	W.E.R.A.	05/22/96
MILWAUKEE	SE	52.680	WB9ZRB/R	O	PL127.3		IND RP SY	07/03/95
MILWAUKEE	SE	145.230	N9BMH/R	O	PL127.3 TT		N9BMH	09/25/95
MILWAUKEE	SE	145.130	N9LKH/R	O	PL127.3 A E L Z	*	MAARS	03/09/96
MILWAUKEE	SE	145.390	WB9AFB/R	O	PL127.3 DS	*	MATC RC	06/10/96
MILWAUKEE	SE	146.625	WB9ZRB/R	O	PL127.3		WB9ZRB	07/03/95
MILWAUKEE	SE	146.670	W9WK/R	O	PL127.3 AEXZRWX	*	ARES	01/01/96
MILWAUKEE	SE	146.790	W9HHX/R	O	PL127.3 CA		MSOE ARC	10/23/95
MILWAUKEE	SE	146.850	W9KHO/R	O	PL127.3		MICORS	07/26/94
MILWAUKEE	SE	146.910	WA9JOB/R	O	PL127.3 DSEXZAWx*		MKE RPTR	05/30/96
MILWAUKEE	SE	147.000	W9PY/R	O	PL146.2 A X	*	P.R.C.	05/22/96
MILWAUKEE	SE	147.045	W9RN/R	O			M.R.A.C.	04/16/95
MILWAUKEE	SE	147.105	K9IFF/R	C	CA E TT	*	K9IFF	03/18/96
MILWAUKEE	SE	147.165	WB9SDO/R	O	PL127.3	*	WB9SDO	03/19/96
MILWAUKEE	SE	224.960	W9EUF/R	O	PL114.6 A Z	*	W9EUF	05/22/96

Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
MILWAUKEE	SE	442.650	N9VBK/R	O	PL114.8	*	N9VBK	06/10/96
MILWAUKEE	SE	443.050	N9OSK/R	O	PL100.0 CA DS WX*		N9OSK	05/20/96
MILWAUKEE	SE	443.150	W9KHO/R	O	PL114.8		MICORS	07/26/94
MILWAUKEE	SE	443.300	WB9TYT/R	O	PL114.8 CA TT D		WB9TYT	07/18/95
MILWAUKEE	SE	443.550	K9HXA/R	C			K9HXA	03/20/95
MILWAUKEE	SE	443.800	N9GMT/R	O	PL114.8 A EZ L X		FM38	09/11/95
MILWAUKEE	SE	444.200	K9HXA/A	C			K9HXA	03/20/95
MILWAUKEE	SE	444.300	W9WK/R	O	PL114.8 L Z AR	*	ARES	01/01/96
MILWAUKEE	SE	444.325	N9CFG/R	O	PL114.8 CA L Z	*	B.I.O.S.	03/29/96
MILWAUKEE	SE	444.800	K9HXA/A	C			K9HXA	03/20/95
MILWAUKEE	SE	444.875	WB9TRO/R	O	PL127.3 E	*	W.E.R.A.	05/22/96
MONROE	SC	145.110	NR9W/R	O	PL114.8 TT	*	G C ARA	05/22/96
MOUNT STERLING	SW	147.360	W9DMH/R	O	E X WX	*	W9DMH	03/18/96
NEW BERLIN	SE	147.285	W9EBF/R	O	PL127.3 E	*	W9EBF	04/16/96
NEW BERLIN	SE	442.400	W9EBF/R	O	PL127.3 E	*	W9EBF	04/16/96
NEW HOLSTEIN	NE	147.300	K9LGR/R	O	A E Z		C.A.R.E.S	10/03/95
NEW RICHMOND	NW	145.270	N9LIE/R	O	PL110.9 L X	*	N9LIE	03/29/96
NEW RICHMOND	NW	444.675	N9LIE/R	O	PL110.9 L X	*	N9LIE	03/29/96
NORTH FREEDOM	SC	443.675	KD9UU/R	O	PL114.8 CAELWX	*	S.W.R.G.	03/29/96
OCONOMOWOC	SE	442.025	N9JUU/R	O	PL114.8		N9JUU	09/11/95
OGDENSBURG	NC	147.165	N9NOJ/R	O	PL103.5 E DS	*	N9NOJ	05/22/96
ONALASKA	SW	444.475	W9LZQ/R	O			RARC	12/17/94
OSHKOSH	NE	147.240	KA9JAC/R	O	CA E Z RA Wx		WIN CTY E	10/13/95
OSHKOSH	NE	147.345	N9AOT/R	O	PL107.2		SOLAR	12/17/94
OSHKOSH	NE	443.450	W9FH/R	O	E		W9FH	09/08/95
OSSEO	NC	145.330	N9LIE/R	O	PL110.9 L X	*	N9LIE	03/29/96
OSSEO	NC	445.200	N9LIE/R	O	PL110.9 L X	*	N9LIE	03/29/96
PARK FALLS	NC	147.000	KA9EOK/R	O	L HLCMB&HYWRD	*	PRICE CRA	06/17/96
PARK FALLS	NC	444.750	KA9EOK/R	O		*	PRICE CRA	06/17/96
PEWAUKEE	SE	147.210	WB9AKC/R	O	PL127.3		WCTC ARC	06/18/95
PEWAUKEE	SE	443.125	WB9AKC/R	O	PL114.8 or 127.		WCTC ARC	06/18/95
PLAIN	SC	442.100	KA9VDU/R	O	PL114.8 L X Wx	*	BURG	01/01/96
PLATTEVILLE	SW	145.270	KA9WBX/R	O	A E	*	UWP ARC	06/17/96
PLYMOUTH	NE	147.060	WE9R/R	O	PL107.2 E DS	*	SHEB.CO	07/05/96
PLYMOUTH	NE	224.940	NF9R/R	O			SCARC	04/10/94
PLYMOUTH	NE	444.100	KD9TZ/R	O	PL107.2 E WX	*	S CTY 440	03/19/96
PLYMOUTH	NE	444.350	WE9R/R	O	PL114.8 E DS L X*		WERA	07/05/96
PORT WASHINGTON	SE	147.330	WB9RQR/R	O	PL127.3 CA EXZWX*		OZARES	03/08/96
PORT WASHINGTON	SE	443.525	WB9RQR/R	O	PL114.8 CA EXZWX*		OZARES	03/08/96
POUND	NC	146.685	KA9JVH/R	O	PL107.2 DS L	*	KA9JVH	06/18/95
POWERS LAKE	SE	443.925	KC9XN/R	O	PL114.8 X	*	LAKARS	03/18/96
PRAIRIE FARM	NW	147.075	K9ST/R	O	P	*	K9ST	04/05/96
RACINE	SE	53.210	N9GKH/R	O	PL127.3		N9GKH	05/28/95
RACINE	SE	147.270	W9UDU/R	O	CA E Z I R Wx		LAKESHORE	07/21/95
RACINE	SE	442.000	W9UDU/R	O	PL127.3 CA		LAKESHORE	09/16/95
RACINE	SE	442.200	N9OEZ/R	O	103.5 CA DS Z		C.A.R.S.	09/25/95
RACINE	SE	443.950	KA9JMK/R	O	PL127.3		KA9JMK	06/18/95
RACINE	SE	444.050	KA9LOK/R	O			KA9LOK	10/03/95
RHINELANDER	NC	145.210	KA9TCC/R	O	CA E UC		NWARC	06/12/94
RHINELANDER	NC	146.940	W9ZZZ/R	O	A E X Z WX AR	*	RHIN RP A	03/19/96
RICE LAKE	NW	147.030	WB9WFG/R	O			BAR ARES	03/28/95
RICE LAKE	NW	443.700	WB9PRI/R	O			WB9PRI	09/18/95
RICHLAND CENTER	SW	146.910	WB9SLI/R	O	PL131.8		P V RP A	09/20/95
RIDGEVILLE	SW	444.850	KB9EBX/R	O	PL167.9		KB9EBX	03/20/95
RIVER FALLS	NW	443.800	K9ZMA/R	O		*	K9ZMA	03/19/96
ROBERTS	NW	147.330	KA9YRV/R	O	PL110.9		SCVRA	09/22/95
RUBICON	SC	145.350	WB9KPG/R	O	A E Z		WB9KPG	01/11/95
SAINT FRANCIS	SE	444.825	WJ9Z/R	O	PL127.3 A TT Z		WJ9Z	09/27/95
SAINT LAWRENCE	SE	146.730	N9LZW/R	O	PL127.3 X RA	*	W.C. ARC	03/29/96
SAYNER	NC	145.130	N9QGJ/R	O	A E Z911 X		MERRIL RA	08/31/95
SHAWANO	NC	145.350	KA9NWX/R	O	PL114.8 CA EXZAR*		KA9NWX	03/01/96
SHAWANO	NC	224.480	KG9AL/R	O	PL114.8 E R	*	KG9AL	03/18/96
SHEBOYGAN	NE	147.255	N9REH/R	O	PL127.3 CADSEL	*	N9REH	06/04/96
SISTER BAY	NE	147.180	W9AIQ/R	O	PL107.2 CA E		DC ARC	07/25/95
SLINGER	SE	52.830	W9MQD/R	O			W9MQD	11/01/94

Location	Rg	Output	Call	Access	Update	OK=*	Sponsor	Updated
SLINGER	SE	443.225	WD9DHI/R	O	PL114.8 DS E	*	W E R A	05/28/95
SOLO SPRINGS	NW	145.490	K9ASC/R	O	A E Z	*	DC RACES	01/28/96
SOLO SPRINGS	NW	147.390	N9QWH/R	O	PL110.9 AZLARWx		N9QWH	10/04/95
SPOONER	NW	147.135	KE6WF/R	O	E X Z L223.2MHZ.*		KE6WF	03/19/96
SPOONER	NW	444.800	KE6WF/R	O	E L X	*	KE6WF	03/19/96
SPOONER/HERTEL	NW	145.190	WB9RBD/R	O	CA E L Z	*	WB9RBD	03/29/96
SPOONER/HERTEL	NW	147.300	WB9RBD/R	O	CA E	*	B.A.R.S.	03/29/96
SPOONER/HERTEL	NW	224.500	WB9RBD/R	O	A E L Z	*	B.A.R.S.	03/29/96
STEVENS POINT	NC	146.670	WB9QFW/R	O	A E Z		CWRA LTD	03/28/95
STEVENS POINT	NC	146.985	W9NN/R	O	A TT E Z AR	*	CWRA LTD	03/29/96
STEVENS POINT	NC	444.700	KC9NW/R	O	E CA L		KC9NW	07/19/95
STOUGHTON	SC	443.325	N9LHS/R	O	PL114.8		N9LHS	03/20/95
STURGEON BAY	NE	146.730	WB9YUY/R	O	PL107.2 R	*	DOOR CO	03/19/96
STURGEON BAY	NE	147.210	W9AIQ/R	O	CA A E X Z		DC ARC	07/25/95
STURGEON BAY	NE	444.000	WB9YUY/R	O		*	WB9YUY	03/19/96
STURGEON BAY	NE	908.000	WB9YUY/R	O		*	WB9YUY	03/19/96
STURGEON BAY	NE	1282.100	WB9YUY/R	O		*	WB9YUY	03/19/96
STURTEVANT	SE	29.640	WA9ZYU/R	O			WA9ZYU	04/10/94
STURTEVANT	SE	224.740	WA9ZYU/R	O			WA9ZYU	04/10/94
SUPERIOR	NW	146.760	W9BWK/R	O		*	T P A RA	01/28/96
SUPERIOR	NW	146.820	WA9VDW/R	O	PL203.5 A DS	*	T P T G	01/28/96
SUPERIOR	NW	444.900	WA9KLM/R	O	A E	*	WITC ARC	06/24/96
TIGERTON	NC	147.135	KF9TS/R	O	X WX	*	KF9TS	05/01/96
TOMAH	SW	145.390	N9BOE/R	O	PL131.8 CA EXZRA*		N9BOE	03/19/96
TOMAHAWK	SC	444.800	N9QIP/R	C	RB WIN PL100		N9QIP/WIN	07/24/95
TOMAHAWK	NC	53.110	N9CLE/R	O	P		TOM RP A	05/28/95
TOMAHAWK	NC	145.430	N9CLE/R	O	A E Z911 X		TOM RP A	05/28/95
TOMAHAWK	NC	223.760	N9CLE/R	O			TOM RP A	05/28/95
TOMAHAWK	NC	444.575	N9CLE/R	O			N9CLE	05/28/95
TREVOR	SE	442.600	KA9VZD/R	O	PL114.8	*	KA9VZD	03/18/96
UNION GROVE	SE	442.250	N9OIG/R	O	PL114.8 L	*	N9OIG	06/10/96
WABENO	NE	145.110	KF9DB/R	O	PL107.2 L147.2		NRL	01/15/95
WALES	SE	224.120	WB9DRO/R	O	PL127.3 CA	*	WB9DRO	03/18/96
WAUKESHA	SE	147.390	N9KS/R	O	PL141.3	*	EARS/KMRA	06/09/96
WAUPACA	NC	146.925	N9BKJ/R	O	CA E X A R Z	*	N9BKJ	06/18/96
WAUPACA	NC	147.390	WA9FDC/R	O	X A R Wx		WP'ACA RC	09/20/95
WAUPACA	NE	444.900	N51IA/R	O	PL114.8	*	N51IA	06/10/96
WAUSAU	NC	53.450	W9BCC/R	O			W.V.R.A.	07/19/95
WAUSAU	NC	146.640	W9SM/R	O	PL114.8 AELXZ911*		W.V.R.A.	01/01/96
WAUSAU	NC	146.820	W9BCC/R	O	CA E X L		R.M.R.A.	07/19/95
WAUSAU	NC	147.060	W9KRY/R	O	PL114.8 X CA E		KC9NW	07/19/95
WAUSAU	NC	224.640	W9SM/R	O	PL114.8 AELXZ911*		W.V.R.A.	01/01/96
WAUSAU	NC	421.250	AD9W/R	O	E L AURAL + 4.5		RMATS	04/10/94
WAUSAU	NC	421.250	AD9W/R	OEL	VIDFM AUD+4.5		RMATS	04/10/94
WAUSAU	NC	421.250	AD9W/R	OEL	VIDFM AUD+4.5		RMATS	04/10/94
WAUSAU	NC	923.250	AD9W/R	O	E L AURAL + 4.5		RMATS	04/10/94
WAUSAU	NC	1250.000	AD9W/R	O	E L AURAL + 4.5		RMATS	04/10/94
WAUSAU	NC	443.325	KA9SOT/R	C			KA9SOT	05/28/95
WAUSAU	NC	443.750	KC9NW/R	O	PL71.9 CA X L		KC9NW	07/19/95
WAUSAU	NC	443.950	KC9NW/R	O			KC9NW	07/19/95
WAUSAU	NC	444.100	W9SM/R	O	PL114.8 AELXZ911*		W.V.R.A.	01/01/96
WAUSAU	NC	444.300	W9BCC/R	O	PL114.8 X E		R.M.R.A.	05/28/95
WAUSAU	NC	906.000	W9BCC/R	O	X		R.M.R.A.	07/19/95
WEST ALLIS	SE	224.520	KA9JCP/R	O	A E TT Z R	*	KA9JCP	03/19/96
WEST BEND	SE	223.820	N9NBN/R	O	CA		N9NBN	12/17/94
WEST BEND	SE	443.425	N9NBN/R	O	PL114.8 CA		N9NBN	12/17/94
WEST MILWAUKEE	SE	147.135	NY9T/R	O	PL141.3 DS		NY9T	09/19/95
WEYERHAUSER	NW	145.170	KA9PZX/R	O	E	*	MAGIC	06/10/96
WINNECONNE	NE	224.500	KB9IE/R	O	CA TT L X	*	P.G.R.A.	03/19/96
WISCONSIN RAPIDS	NC	146.790	W9QQA/R	O	PL114.8 CAEXZAR	*	MIDST RA	01/01/96
WISCONSIN RAPIDS	NC	147.330	K9PJB/R	O	PL114.8 E	*	WI AIR RA	06/19/96

08-27-96
Wisconsin Association of Repeaters - Used by permission

Hams drill and test to be at their best

By Mack Brophy, N9NTB

Simulated plane crash

Dane County Amateur Radio Emergency Service and Four Lakes Amateur Radio Club Amateur Radio operators took part in a simulated disaster drill at the Dane County Regional Airport on Thursday, October 3.

The drill simulated the crash of a Boeing 707 aircraft on the airfield, with approximately 40 casualties. An Air Guard KC-135 was used to simulate the Boeing 707.

The Amateur Radio operators provided VHF voice and data (packet) support for the Dane County Emergency Operating Center (EOC), the Badger Chapter

of the American Red Cross radio room, the primary staging area, the Red Cross mobile kitchen, and the Red Cross Service Station in Building 500 of the Air National Guard base.

The drill was conducted from 9:15 a.m. to approximately noon, with EMS and fire departments from surrounding communities providing assistance to Madison fire and paramedic personnel.

FEMA/RACES net test

Radio Amateur Civil Emergency Service (RACES) Amateur Radio operators participated in a Federal Emergency Management Administration (FEMA) RACES high frequency net test on October 2, 1996.

The test was conducted to check the capability of Amateur Radio operators to provide HF radio links between the states in FEMA Region 5 and FEMA Region 7.

RACES Amateur Radio operators proved their ability to link the state EOCs by HF radio during an emergency or whenever the need might arise.

This test will be repeated the first Wednesday of each calendar quarter to ensure the preparedness of the state EOC radio equipment and the availability of trained Amateur Radio operators.

Odds and Ends

• **Western Union standard numbered message texts:** We had an e-mail from Mark Thompson, WB9QZB, who is trying to help a friend locate a copy of those texts, which would be a "relative" of the ARL numbered texts used in Amateur Radio traffic handling. Here's the query:

"I believe that back in the days when commercial telegraphy was done with manual keys, messages were often composed using a code-book of conventional phrases and 5-letter codes representing each one. The codes were easy to key, much shorter, and would even represent the same idea in any language for which the code book existed. I read "BERON", a sci-fi story by John Berryman, way back when I was a kid and dinosaurs roamed the earth. It was based on this idea and, as best I can recall, the code was the "Western Union Telegraph Code."

"Do you know anything about such code books, whether the Western Union variety or any other used for manual telegraphy? Even perhaps know where one would find a copy?"

If you have any info for the gentleman, please drop the editor a note or e-mail. See the masthead on page 2 for addresses.

• **Much Ado About Zedding!** Some time back, an amateur who works with the Wisconsin Department of Emergency Management in Madison forwarded a packet message to me about the "illegality" of using "zed" during identification for those of us

FCC issued callsign update

The following is a list of the FCC's most recently issued call signs as of October 1.

District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	AB0CW	KI0EP	+ +	KB0YOV
1	AA1QP	KE1GD	N1XXL	KB1BZV
2	AB2CD	KG2IM	+ +	KB2ZXJ
3	AA3OZ	KE3XO	N3YCJ	KB3BQL
4	AE4YG	KT4WL	+ +	KF4MIE
5	AC5JU	KM5DV	+ +	KC5WIR
6	AC6XR	KQ6JS	+ +	KF6GOG
7	AB7SQ	KK7BP	+ +	KC7SVE
8	AA8YA	KG8YX	+ +	KC8EYJ
9	AA9TJ	KG9ID	+ +	KB9OPS
HI	AH7E	AH6OU	KH7BM	WH6DCV
AK	#	AL7QS	KL0AV	WL7CTY
VI	WP2X	NP2CJ	NP2JL	WP2AIG
PR	KP3V	KP3AN	NP3GJ	WP4NMM

Shuttle Atlantis carries three hams into space

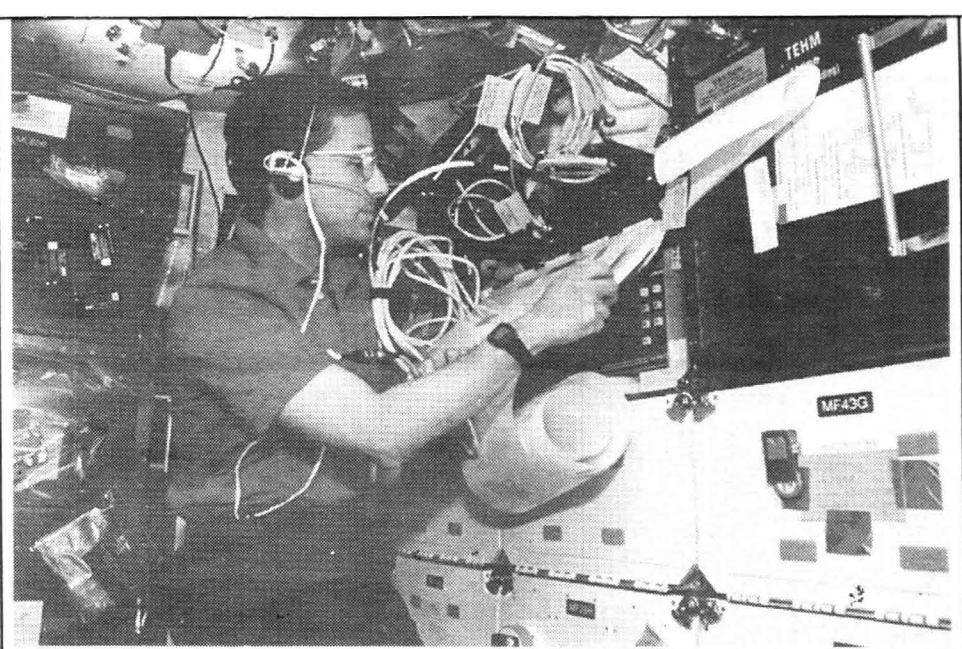
Three hams were aboard space shuttle Atlantis/STS-79, which was launched in September. Astronauts aboard included Jay Apt, N5QWL; Carl Walz, KC5TIE; and John Blaha, KC5TZQ. Blaha will spend 120 days as a resident on the space station Mir, replacing Shannon Lucid, who had been living on Mir for the last six months. The shuttle docked with the station to make the exchange and to pick up and drop off materials and equipment at Mir.

STS-79 carried the Shuttle Amateur Radio EXperiment (SAREX) payload in configuration M. Configuration M is voice-only operations on a downlink frequency of 145.84 MHz FM. Voice uplinks are on 144.45 and 144.47 MHz.

Packet radio was not on Atlantis this mission.

Alan Crowder, KC7KCG, in Seattle, Washington, reported making the first 2-meter contact with N5QWL while in his car using a half-wave vertical running 25W. Reports were 59 on both ends. Other hams successfully contacted N5QWL and the other hams aboard.

The crew had three prearranged contacts with schools: Andover Middle School in Andover, Kansas (September 20); Immaculate Conception Elementary School in Celina, Ohio; and the Royal School For Girls in Haslemere, Surrey, England (September 22). The students have been preparing for their contact for several months. These contacts occurred after the shuttle docked with Mir. Random contacts were also be made with the ham community.



During off-duty time, Jerome (Jay) Apt, N5QWL, talks to ground contacts via the Shuttle Amateur Radio Experiment (SAREX). The radio was also used for communications between the Space Shuttle Atlantis and Russia's Mir Space Station during docking and undocking activities. Liftoff of STS-79 was September 16 from Launch Pad 39A at the Kennedy Space Center, and the flight ended with landing at KSC September 26.

The ARRL Letter, 9/20/96

NASA photo

Odds and Ends

Continued from page 8

with the letter "Z" in our calls.

The fellow seems to need productive things to do in Amateur Radio. Two examples are below, and please see our October comments, too.

I identify as K9 ZED ZED. This is very much in keeping with the basis for the FCC's ID requirements - that they be clear and unambiguous. In the 19 years I have had the call, no one has ever had trouble understanding my call. How about John, NZ9Z?

Bob, N9ZZ? Rob, WA9ZTY? Rick, NI9Z? We all do that. No citations. Perfectly clear. Perfectly understandable.

How did I happen to pick K9ZZ? (Extras were given that opportunity in 1977.) I was talking with Fred Laun, W9SZR, a UW-Madison grad and FLARC "alumnus" at the W9DXCC bash in 1976 or so. I had originally planned to ask for my initials. But Fred said, "Get something with Z or O. They don't require phonetics." DXers, like I was then, like that! I followed Fred's advice. Got K9ZZ. Fred followed his own advice, too. He got K3 ZED O.

There are far worse things happening in the hobby than hearing a ZED. Like maybe losing two of our bands, 2 meters and 70 cm. Picky people would be better off and help the hobby at the same time if they would support efforts to keep our bands, codify PRB-1 as Wisconsin law, and help other efforts that benefit the hobby - maybe even helping along the way to prevent ham radio from becoming extinct. 73!

BSSS Club Subscription Plans and Rates

Non-Commercial Advertising Rates

Hamfest/Swapfest business card: \$68.00 per year
(includes 1 no-charge flyer reproduction)

Hamfest Flyer reproduction only: \$35.00
Two times: \$62.00
Additional flyer reproductions: \$27.00

There is no additional charge for "Business Card" Swapfest advertisers for one hamfest/swapfest flyer inclusion. \$27.00 for each additional inclusion.

We will reduce a typical 8.5 x 11 inch hamfest/swapfest flyer to fit a 9 inch x 2 column space. The regular business advertiser rate for this ad would be \$56.70 for one time and \$106.20 for two times, resulting in a saving of \$21.70 for one time and \$44.20 for two times. The "business card" plus flyer commercial rate would be \$131.70, with a resultant saving to the hamfest/swapfest advertiser of \$67.70 for one flyer and \$86.20 for two flyer ads. FLYERS MUST BE RECEIVED BY THE EDITOR AT LEAST EIGHT WEEKS PRIOR TO THE DATE OF THE EVENT.

CLUB SUBSCRIPTION RATES Subscribing Members of Club Only

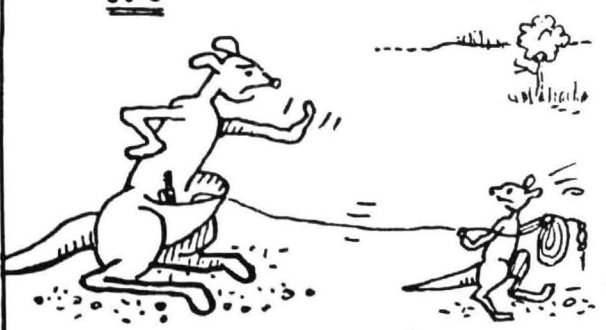
10 or more subscriptions, per year: \$9.00
50 or more subscriptions, per year: \$8.40

All Members of Club (Billed Quarterly)

Less than 50 members, per year: \$8.40
50 or more members, per year: \$7.80

Must include all members of club to qualify for rate. Up to 15% additional complimentary mailings can be included at no added cost. These are useful for sending BSSS to political or community leaders and/or prospective members. And, your club's minutes are published in BSSS as a service to your club. Contact Badger State Smoke Signals, Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, (608) 742-3560.

"I SAID YOU COULD HAVE A 2-METER HT,
BUT **NO** HF OUT-SIDE DIPOLE !!"



Badger State Smoke Signals

W9ODV



It's Time For Another Swapfest



The Ashwaubenon High School Tech Club

Ham Radio & Computer Fleamarket

When : December 8, 1996
8:00 AM to 1:00 PM

Where : Ashwaubenon High School
2391 South Ridge Rd.
Green Bay, Wisconsin

Admission \$3.00 in advance or
\$4.00 at the door

Talk In on 147.075+ (PL 107.2Hz)

4 foot tables are available for: \$4.00 in advance or
\$5.00 at the door

Pre-Registration Form

4 foot table(s) _____ @ \$ 4.00 = \$ _____

Admission ticket(s) _____ @ \$3.00 = \$ _____

Total amount enclosed with SASE = \$ _____

Name _____

Address _____

City _____ State _____ Zip _____

Call Sign _____ Phone _____

Make Checks payable to Ashwaubenon High School Tech Club,
P.O. Box 12631, Green Bay, WI. 54307

Contact information: Scott Cole, KB9AMM
P.O. Box 12631
Green Bay, WI 54307

PARTICIPATING CLUBS AND ORGANIZATIONS



Riverland Amateur Radio Club

Dan Abts, N9PZC
Secretary

Club mail address: P.O. Box 621
Onalaska, WI 54650



MEETING MINUTES October 1, 1996

The October meeting of the Riverland Amateur Radio Club was called to order at 7:04 p.m. on October 1, 1996 by President Duane, W9HWQ. There were 18 people in attendance.

The minutes of the August meeting were accepted as read by Dan, N9PZC.

Roger, KA9BKK, read the treasurer's report. We have 72 paid members. The report was accepted as read.

Programs: The program for tonight was helping Feroz, WU9N, design his ham shack.

444.475 Repeater: Dan, N9PZC, reported that the 440 repeater is ready to be installed. It is putting out the full 25 watts and the problem with the phone patch has been solved. Bob, N9LZK, has secured it to a case that can be mounted in a rack. There has been a delay getting a phone line installed.

Net Manager: Pete, N9XVG, reported that the Sunday Night Net has been held regularly with between 15 and 20 check-ins. He has volunteers signed up to be net control through October 6. He asked for people to see him after the meeting to sign-up for a Sunday in October or November. He would like people to contact him at (608) 781-5488 and let him know if they would like Newsline played on the

Sunday night net.

ARES/Skywarn: Nothing new.
Property Manager: Bob, N9LZK, was not present.

146.97 Repeater: Walt, AA9AW, reported that the repeater is working fine.

Field Day: Nothing new.

VE: Bill, KE9XQ, reported that three people took tests at the September 21st test session. Two passed their tests.

Old Business

None.

New Business

Kent, W9LZQ, brought up the issue of dwindling attendance at club meetings and interest in the club. He asked us to think about what the club can offer its members. Bill, KE9XQ, will draft a survey and present it at the next club meeting seeking input from the membership.

We have received notification that the Riverland Amateur Radio Club has been approved as a Special Service Club.

Feroz, WU9N, made a motion at 8:08 p.m. to adjourn the meeting. The motion was seconded by Kent, W9LZQ, and passed.

Respectfully submitted:
Dan, N9PZC

Wisconsin Nets Association Ltd.

Jim Merrill, W9AYK, Secretary • W283 Hillendale Drive
Oconomowoc, WI 53066

WISCONSIN NETS

Net	WNA	Freq.	UTC	CDT	Mgr.
BWN	Yes	3985	1100	0600	W9AYK
BEN	Yes	3985	1700	1200	KE9VU
WSBN	Yes	3985	2230	1730	K9UTQ
WNN	Yes	3723	2300	1800	N9MXW
WSSN	Yes	3645	2330	1830	N9BDL
WIN/E	Yes	3662	0000	1900	WB9ICH
WIN/L	Yes	3662	0300	2200	W9UW
NWTN	Yes	34/94	2330	1830	NS9Q
(Rhinelander area)					
RCRA	No	01/61 (Mondays CST)	2330 (Menomonie Area)	1830	KA9OMC
Gr. Bay	No	72/12 (Green Bay Area)	0145	2045	WB9NRK
ARES	No	4.65/5.25 (South East/South Central Wisconsin)	0100	2000	
RACES	No	3993.5 (LSB Sunday)	1300	0800	WA9OAY



Notes From the Section Manager

Roy Pedersen, K9FHI • 510 Park Street
Juneau, WI 53039



WB9ESM is now a Life Member of ARRL, congratulations, John.

New officers for the WNA: Bob Foster, N9UAR, is the new treasurer; Carl Plotz, WB9JSW, is the new chairperson, and Art Evans, KA9KLZ, is still the secretary.

The Wisconsin traffic nets need your participation. Dust off your keys, clean up the contacts; plug in your microphone; let's all do it. It's fun.

Our Official Observer Coordinator, KF9KZ, is going to be sending out papers for LIC (Local Interference Committee); have your club participate in this.

Mid Winter swapfest by West Allis RAC is January 12; hope to see many of

you there.

Do you realize that we have a good Wisconsin newsletter, the *Badger State Smoke Signals*? It is really nice to read all the information in it. At the same time, when you subscribe, why not join the WNA Booster Club to benefit the WNA?

Conditions on 40M for the 9th Region Net are almost impossible. Propagation is very poor. Also, the Central Area Net on 20M is in about the same condition. We need more participation on these nets. Please help.

Frequency for the 9th Region in 7282 first session at 1730Z, second session at 2100Z. Central Area Net is 1900Z on 14345, + or -.

Minutes of the WNA on the air meeting September 22, 1996

The meeting was called to order by the chairman KE9VU at approximately 12:30.

Present were: WB9NRK, KE9VU, W9AYK, W9KKM, WB9JSW, KA9KLZ, K9FHI, N9UAR, N9BDL, N9KHD, W9-CBE, W9UW and K9DHR.

The minutes were approved as mailed. UAR/FHI.

OLD BUSINESS

Picnic committee's report: The picnic will be held in conjunction with the Appleton swap fest on November 3 at the Starlight Club on highway 55 North of Kaukauna. WB9JSW reported that we have permission to use the same building as is used by the club after they are finished testing. We should be able to use it by noon. People attending are to bring their own meat, a dish to pass and your own beverages. The committee will arrange to have a grill available to cook with. FHI-/AYK. K9FHI has a book that the ARRL has donated and the committee will look for a few door prizes. Plan to bring an item (donated) for an auction or a donation for the WNA treasury. VU/UAR.

Treasurer indicated that the treasury is larger than it was before. (the report is included in this mailing).

REPORTS

SM K9FHI noted many were behind in their appointments. There are a lot of new hams in Wisconsin. He has a lot of paper work to do but he is enjoying it.

STM KA9KLZ: Nets are doing fine. Novice net manager has a new business so is very busy for a while. The delegates are helping to keep the net in operation.

BWN W9AYK: Activity is still 40-60 checkins per session, with Sullivan getting 40-50 reports daily. We occasionally can handle other traffic also. NWS open house was held at the Green Bay facility Friday Sept. 20. 22 Amateurs and some spouses attended. Mike Skilling, NWS MIC Green Bay, welcomed us and introduced his on-duty staff. Also present were three staff from Sullivan: Ken Rizzo, MIC; Rudy Schaar; data acquisition manager; and Rusty Capella, severe weather situation coordinator. They gave us a tour of their facility, which included a Doppler radar replay of the conditions prior, during and after the Oakfield tornado of this summer.

After the tour, Ken Rizzo gave a special service award to the Badger Weather Net along with a letter of appreciation for our 32 years of volunteer participation in weather information reporting. Copies were made of each and given to those present. Follow up copies will be sent to

OFFICIAL PUBLICATION OF CENTRAL WISCONSIN RADIO AMATEURS, LTD.

At University of Wisconsin, Stevens Point



WB9QFW 2-Meter Repeater 146.07-.67 and Club Station

P. O. Box 923 • Plover, WI 54467

Due to basic stupidity on the part of the editor of BSSS, the September minutes of the CWRA meeting were left out of the October issue. I apologize for the omission, and assure you it was not intentional.

MEETING MINUTES September 11, 1996

President Mary Eiden, KA9FAS, gave the club to order just after 1930.

After a program consisting of a slide show of her railroad trip to the National Model Railroad Association conference in California, we got down to business.

Secretary David Tamres, KB9IIF, was called away, so Joe Larson, N9JW, filled in for him.

We welcomed some new hams to the group: Gary Johnson, WL7TL, Jerry Fadness, N9TSQ, and Jeff Ramlow, N9-WBR. Glad to have you with us!

The 146.985 repeater appears to be losing about 50% of its power in the duplexers. It may need some work. The coax has been in place up there for something like ten years, also, and we should consider replacing that as well.

Last month's picnic and fox hunt was a rousing success. We gave Bob Baird, W9NN, a round of applause and our sincere thanks for being such a gracious host. There were plenty of golf balls hit into the river behind his house. Nobody liked the onions, but there were plenty of empty beer cans left behind. The fox hunt was

won by the team of NE9U and KB9GXV. Second place went to N9JW, and third went to WA9LWJ. Al Mallek, K9WVM, was also commended by the club for the excellent job he did setting up the food.

Mike Pagel, KA9LAQ, reported that when he was reassembling the club station after Field Day, he found the autotuner was dead. He will be consulting with one of the club engineers about repairs, and asked for permission from the club to send it out to be fixed if that was the wisest choice. We voted to approve this.

John Feltz, WA9LWJ, talked about the facilities in the Junction City park for our swapfest next June, 1997. We can get the newer building for \$25 per day, and the older building for \$50 per day. He penciled us in for June 7-8, 1997, for two days of the newer building and one day (Sunday) for the older building. We voted to approve this location for the swapfest; vendors will be able to set up the day before in the newer building, which can be secured overnight. The older building has room for meetings and exams on Sunday.

N9BCA, WA9LWJ, and KA9LAQ volunteered to organize the swapfest next year. The club treasurer was directed to send some up front money to the Village Clerk to secure our request. This would also include the newer building, for an additional two days later in June for Field Day.

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Wisconsin Nets Association Ltd.

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those not attending. Pictures were taken by WB9JSW and the NWS personnel. (Odd.. BSSS never received any of those photos to print.)

BEN: KE9VU reports that the net is doing well. They average 22 checkins, 4-5 pieces of traffic and about 35 minutes per session. 9RN and Late WIN representatives are consistent.

WSBN: N9UAR said UTQ has the records but from his log book the net has 18-22 checkins, 5-7 pieces of traffic and uses 28-33 minutes per session. If the NCS misses a net, some one usually helps out.

WIN/EARLY: W9CBE reported that WB9ICH still might check in with the figures. He said the net keeps rolling along like the ocean.

WSSN: N9BDL said they get 5-10 checkins per day and about 0.5 QTC/session. A few old timers and some new people some times check in.

WIN/LATE: W9UW reports that traffic has been up but, 4 times so far this month the winter skip has caused them problems. They might have to get a packet link as back up when winter settles in.

OBM: WB9NRK (Official Bulletin

WISCONSIN NTS TRAFFIC REPORT

September 1996

Checkins were down and traffic was up for the month of September. Conditions are substantially better for all of the nets except for Late Win. Win/L N/M reported that winter skip is threatening operations of the net.

With seven of the eight nets reporting, 3592 stations passed 2638 pieces of traffic in September. As usual, The Badger Weather Net (BWN) N/M W9AYK, reported 1571 stations and 2267 messages passed.

The Badger Emergency Net (BEN) N/M KE9VU reported 976 stations and 108 messages passed. The Wisconsin Sideband Net (WSBN) N/M K9UTQ reported 629 stations and 88 messages passed. No report was received for the Wisconsin Novice Net (WNN), N/M N9MXW. The Wisconsin Slow Speed Net (WSSN) N/M N9BDL reported 236 stations and 20 messages passed. The Wisconsin Interstate Net/Early (WIN/E) N/M WB9ICH reported 243 stations and 80 messages passed.

The Wisconsin Interstate Net/Late D(WIN/L) N/M W9UW reported 208 stations and 55 messages passed. The Northwoods Traffic Net (NWTN) N/M NS9Q reported 89 stations and 20 messages passed.

Mgr) is new in the activity so he is learning and working at finding stations that can help get the word out from ARRL sources to the amateur community.

NOVICE NET: An unofficial report for the Novice Net by N9BDL saying that KA9DBH, Rob, from Thorp, will be the main honcho for now. Please check in if you can. They can use the participation.

NEW BUSINESS:

W9CBE recommends that after traffic is listed that the NCS would look for takers so it can be moved more quickly. Currently, the NCS stands by for additional checkins before getting the traffic started. Comments were favorable so UAR/FHI. No dissent was heard so the motion was carried.

ELECTION OF OFFICERS

The office of chairman and treasurer are open this year. WB9JSW was nominated by KA9KLZ. Carl accepted the nomination. It was moved and seconded to close the nominations. AYK/FHI. WB9JSW was elected. Treasurer's office: KE9VU was nominated by W9CBE. VU declined the nomination. K9FHI nominated N9UAR; he accepted. FHI/VU.

There being no further business, the meeting was adjourned at 1:19 PM.

Submitted by W9AYK, Secretary

In September, eight stations reported traffic totals in excess of 100, three of whom made Brass Pounders League. The stations are: W9AYK/1630 (BPL), WB9JSW/853 (BPL), W9IHW/823 (BPL), W9CBE/224, K9DHR/155, K9FHI/111, N9BDL/110 and W9YCV/105.

Thirty stations submitted Station Activity reports and eleven stations submitted Public Service Honor Roll reports.

I mail my reports to League Headquarters on the 7th of the month. That makes the deadline for reports the 6th. I can accept reports until I start printing them up for mailing. If you can catch me on the BWN on the morning of the 7th all would be well.

Hale Blakely, W9CBE, Asst. STM will also accept reports and forward them to me. Hale covers most of the CW and SSB nets so there is someone on almost every net to take reports.

Reports can also be sent via packet. My packet address is:

KA9KLZ @ NX9V.WI.USA.NOAM

Thanks to all stations who participate in the Wisconsin nets. You are the nets and Wisconsin nets are the best. 73.

Submitted by:
Arthur A. Evans, KA9KLZ
Wisconsin Section Traffic Manager
October 7, 1996

Taylor County Area Amateur Radio Club

Mike Schoenfuss, N9GHZ, Secretary

P. O. Box 401 • Abbotsford, WI 54405-0401

MEETING ANNOUNCEMENT

The next regular meeting will be held on Thursday, November 7th at 7 p.m. in the Emergency Government meeting room located in the basement of the sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Sts., Medford, WI. Talk-in on the 147.15 Medford repeater (+ 600 kHz) or 146.52 MHz simplex.

NOTE: Club secretary N9GHZ will NOT be able to attend this meeting. It is requested that someone in attendance record the meeting minutes and IMMEDIATELY mail them to N9GHZ, so that they can be typed up and submitted to *Badger State Smoke Signals* in time to make the publishing deadline. Thank you!

A MESSAGE TO ALL TCAARC MEMBERS FROM CLUB SECRETARY N9GHZ

I wish to advise the present officers and members of the Taylor County Area Amateur Radio Club that I will NOT be avail-

able to run for office in 1997. I have made my decision based on several factors. For one thing, I have taken on a second, part-time job, which will require me to work during the early evening hours, the same hours during which we hold our club meetings.

Secondly, I have held an office in this organization for many, many years now, with the exception of only one or two years, mostly serving as Secretary, a few years as President. I feel that we have a large enough membership now that someone else should be able to take on the position of Secretary. It is not right that one person be saddled with this position year after year after year.

Finally, I am already "wearing too many hats" as it is. In addition to my duties as club secretary and newsletter editor, I am also the Amateur Radio Emergency Service (ARES) Emergency Coordinator for both Clark and Taylor County, and an Assistant EC for Marathon County. I'm involved in administering Amateur Radio exams as a Volunteer Examiner, and I serve as the club's VE Team Liaison, completing all of the paperwork necessary

Continued on page 12

Watts Snoo

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N9JW announced he was again planning to hold a Novice/Technician license class. Class begins October 2, 1996, and will go for ten weeks in room A112 of the UWSP Science Building. Class will meet from 1930 until about 2130 each Wednesday evening, except for the day before Thanksgiving. A minimum starting class size of six will be required this year or the class will be canceled.

We then held our ever exciting annual elections. Thanks for a job well done to the outgoing office holders, and welcome or welcome back to the 1996-1997 team:

President: Mary Eiden, KA9FAS
Vice President: Bob Baird, W9NN
Secretary: Mike Eiden, WD9JID
Treasurer: Joe Larson, N9JW
Activities Manager: Mike Pagel, KA9LAQ
Engineers: Jim Tuszka, N9MEB, and Ron Howe, NJ9H.

Next month's meeting will be October

MEETING MINUTES October 9, 1996

President Mary Eiden, KA9FAS, called our meeting to order at 7:32 PM.

This month's program was a presentation by Mike Urban, KB9GXV, on the Wireless Weather Information Systems. It is a computerized weather system and he showed how it works and what it can do. It was very informative.

Mary Eiden, KA9FAS, announced that the minutes from the last meeting were not in the last issue of *Badger State Smoke Signals*. She said that she had them available for all to read. Our Treasurer, Joe Larson, N9JW, was teaching classes, so Mary read the treasurer's report. Both the minutes and the treasurer's report were approved as read.

Mary read a letter from the Wisconsin Special Olympics thanking us for helping them with the Summer games in June. They informed us that the Olympics will be June 5, 6, and 7, 1997. The letter was from Bob Whitehead.

Mary also presented Art Wysocki, N9BCA, with a certificate for the 1996 Wisconsin QSO Party. The certificate was for 1st place for multi-operator-mobile operating NE9U. Congratulations, Art!

Frank Guth, W9BCC, wondered if we were contacted on helping out the Frosthite Run. The group decided at a previous meeting that due to conflicts with the exams, we would not volunteer unless approached by the YMCA.

Frank also asked if we had a current membership list of the hams in Portage County. Mary replied that when she sent out some mail to all the hams, some of them came back marked "incorrect address". Frank says we should have an updated list. Scott Jasper, NE9U, says you could use a CD-ROM callback to get the list updated. It was also mentioned that using the Internet would be a way to up-

9, 1996, at 1930 hours in A107 of the UWSP Science Building. The program will be a presentation on an emergency communications seminar attended by Mike Urban, KB9GXV, using the PowerPoint presentation software.

Attendance

Joe Larson	N9JW
Mary Eiden	KA9FAS
Doc Rifleman	WA9N
Bob Baird	W9NN
Gary Johnson	WL7TL
Gene Kroll	KE9MA
Deb Kroll	N9EIL
Jerry Fadness	N9TSQ
Jeff Ramlow	N9WBR
Dave Golla	N9OVT
Ron Howe	NJ9H
John Feltz	WA9LWJ
Arthur R. Wysocki	N9BCA
Gordon Miller	KE9IA
Mike Pagel	KA9LAQ
Jim Tuszka	N9MEB
Jim Benak	KA9ACE
Frank Guth	W9BCC
Mike Eiden	WD9JID

Respectfully submitted:

Joe Larson N9JW

CWRA Treasurer, acting Secretary

date the list. Mary said she will check with John Feltz, WA9LWJ, for a CD-ROM callback.

Bob Baird, W9NN, reported that the 985 repeater was working good. He stated that the autodial needs some more work and that the club message had to be put back on.

Scott Jasper, NE9U, reported that the 67 repeater was working OK.

He also reported that he sent the Kenwood TM201 and the Allinco DR101 packet node radios into AES for repair. He said that the radios have been declared "lightning struck" and unrepairable. He sent in a claim to the insurance company.

Art Wysocki, N9BCA, said he will be checking on prices and a place to hold our annual banquet. He will report back at the next meeting. He will check several places.

The meeting adjourned at 8:08 PM.

Next month's program was not announced. The next meeting will be held Wednesday, November 14, 1996 at 7:30 PM in Room A-107 in the UWSP Science Building.

Attendance

Mary Eiden	KA9FAS
Mike Eiden	WD9JID
Al Mallek	N9WBS
Gordon Miller	KE9IA
David Tamres	KB9IIF
Jerry Fadness	N9TSQ
Scott Jasper	NE9U
Art Wysocki	N9BCA
Gary Johnson	WL7TL
Mike Urban	KB9GXV
Frank Guth	W9BCC
Bob Baird	W9NN

Respectfully submitted:

Mike Eiden, WD9JID

CWRA Secretary



e.c.a.r.c.

**eau Claire
amateur RADIO CLUB**

Carl Searing, W9NW, Secretary
1129 McKinley Rd. • Eau Claire, WI 54703
<http://www.edp.net/~mceraso/ECARC.html>

A roll call opened the meeting at 1930 hours, with President Kevin Zehr, N9OHE, presiding. 29 members and guests were present. Secretary's and treasurer's reports were read and approved.

The annual club Christmas party is planned for Tuesday, December 10 at the same place as last year. Ham, buns, and beverages to be supplied by the club; members/attendees to bring a dish to pass and their own utensils/plates, etc. Volunteers are solicited to help with decorations, etc.

Election of officers is upcoming. The nominations committee is N9OHE, WB9RBP, and N9JOE. Members will be contacted. Please consider serving as an officer. The tasks are not difficult, and every

member should be willing to serve for one year.

We understand that Mission Eau Claire will run again in 1997. The club will hold No-Code Technician classes starting in January, 1997. Teachers once again: WB9RBP, K9OMY, and N9JOE.

There was some discussion of repeater operating procedures, mainly having to do with "use, but not abuse". A tone on the output of the repeater was discussed. There was a request for volunteers to act as net control for the Sunday evening net.

The date of the ECARC 1997 hamfest has been set at July 12.

Lunch Committee for the November

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Taylor County Area Amateur Radio Club

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to hold exam sessions. I am also an ARRL Public Information Officer for the Wisconsin Section. And, in the past, I have taught Amateur Radio license exam preparation courses throughout the two-county area.

By not taking on another club office for the coming year, I hope to be able to devote more time to my many other duties and responsibilities. Hopefully, I will be able to offer more classes again in the future.

I am notifying you now, at this early date, to give the club membership and officers the time needed to recruit a replacement for me for 1997.

EXCERPTS FROM MINUTES OF OCTOBER 3, 1996 MEETING

Meeting was called to order by President N9GEN. Present were N9GEN, KB9BLV, WD9FWP, AA9LE, N9UBR and W9QHI.

Minutes of the September 5, 1996 meeting were accepted as printed in the October, 1996 issue of *Badger State Smoke Signals*. Secretary N9GHZ was absent. There was no treasurer's report as Treasurer KA9WDX was also absent. W9QHI submitted a bill for \$3.00 which still needs to be paid.

It was reported that AA9LE, N9UBR and W9QHI had made several trips to the 147.15 repeater site since the September club meeting, and had swept and vacuumed out the shed where the repeater is housed, as well as re-drilled the holes for the front bottom metal panel of the repeater cabinet, and touched up the paint on the panel where it had been scratched in the past. Thanks to those three individuals for the time and work they provided to get the job done.

It was reported that there are two new Amateur Radio operators in Taylor County. N9GHZ has spoken with both of them already. Roy Williams, WB0HMS, is the new pastor at St. Paul's Lutheran Church in Medford, and resides in the parsonage in Medford, as of October 1st. He has a General Class license, and is active in packet radio, among other things. Arnie Patton, N9KJK, has recently moved to the Stetsonville area from Mosinee. He holds an Extra Class license.

Regarding the club-sponsored VE exam session scheduled for October 12th, it was reported that N9GHZ had mailed in the "Session Registration And Request For Test

Materials" form to the ARRL/VEC on September 7th. He also sent a news release, announcing the test session, to all Clark and Taylor County area newspapers on September 30th. A copy of the news release was passed around for the members to look at. Also, on that same date, he provided the Taylor County Sheriff's Dept. with a memo advising them that we would be conducting an exam session in the courthouse building on October 12th.

Arnie Patton, N9KJK, recently moved to the Stetsonville area, and recently contacted N9GHZ. Arnie holds an Extra Class license and is also an accredited Volunteer Examiner. He is also planning on attending our October 12th test session to assist.

Copies of the announcement of the October 12th exam session were passed out to those members present who had not yet received one. Everyone was reminded to make announcements of the test session on any 2-meter nets they might check into between now and the date of the test session. Members were also encouraged to take extra copies along with them to post on bulletin boards in public places such as schools, supermarkets, malls and laundromats.

Some correspondence the club recently received from Buckmaster Publishing, which consisted of an offer for free computer CD-ROM's for the club, containing the Amateur Radio call sign database, in exchange for members of our club sending in their photographs to be included on the CD-ROM, was read and discussed, but no action was taken on it at this time.

Several handouts, provided by N9GHZ, were passed out to those members present. The handouts consisted of updated information on the threat to the 2-meter and 70cm bands, Senate Bill S. 2025 dealing with CB Radio RFI, and Wis. Assn. of Repeaters news.

Meeting was adjourned.

CLARK/TAYLOR COUNTY AMATEUR RADIO EMERGENCY SERVICE (ARES) NEWS

Mike Schoenfuss, N9GHZ
ARES Emergency Coordinator

Don't forget to try to check into the weekly ARES net held Wednesdays at 8:30 p.m. on the Medford repeater (147.75/147.15). If the repeater is down or not functioning properly, alternate frequencies, in order, are 147.15 MHz simplex and 146.52 MHz simplex. You're also encouraged to volunteer for net control duty for the net.

Mancorad Radio Club

John Meyer, NZ9Z, Secretary

P.O. Box 204 • Manitowoc, WI
54221-0204

2-Meter Repeater: 146.01 Input/146.61 Output

MEETING MINUTES October 9, 1996

The October meeting of the ManCo-Rad Club was called to order at 7:35 PM by club president, Red, N9GHE.

The minutes of the September meeting were approved as printed in the *Badger State Smoke Signals*. The motion to approve was made by Ken, K9HAG, and seconded by Eric, WD9IAB. Red noted the nice mention in the BSS of the club's donation of software for the paper.

The president read the names of two prospective members: Randy Benedict, KB9ONC, and Fred Neuenfeldt, W6BSF (ex-K9DGE). Welcome to the club, Randy, and welcome back to the club, Fred!

The treasurer's report was approved as read by Glenn, AA9MT. The motion to approve was made by Dick, N9QFY, and seconded by Eric.

There was no old business.

New Business included appointment of an elections committee, who will prepare a slate of members to run for office at the November meeting. The elections committee consists of Ken, WB9OBX, Roger, W9NPX, and Fred, W6BSF. Please make their job easier and offer to run for an office -- your club is only as good as you make it!

Red mentioned the possible convening of a committee after next month's elections

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Eau Claire Amateur Radio Club

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12 meeting: KB9R and KF9XH.
Next Eau Claire VE exams: October 12, 1996; January 11, 1997.
Meeting adjourned: 2011 hours.

<http://www.edp.net/~mceraso/ECARC.html>

This is courtesy of Melanie Ceraso, N9QWE.

Quarter Century Wireless Association Southeastern Wisconsin Chapter 162

Larry McCalvy, WA9JMO
5400 Six Mile Road
Radne, WI 53402



A vintage generator, pre-World-War II by date, and currently owned by the Racine Megacycle Club, who used its service as the power source for many yearly Field Day activities was saved from the scrap heap by Bill Komistra, W9OVZ. The generator, a former military component, lacked a manual and it appeared, also lacked a source for parts. The water pump and idler arm assembly were badly worn, to the point of permanently shutting down the power plant.

The fruitless search for replacement parts caused the club to actively seek and obtain another system. Bill offered to rebuild the water pump and idler arm assembly, and if needed, manufacture necessary parts. As summer faded into the sunset, the system was cleaned, hoses and other worn parts were replaced, the generator smoked tested, and Bill pronounced the system functioning as required. Super Job, Bill!

On a sadder note, Bruce Zabler, K9RRS, has suffered a set-back. A tumor on his spine exerted pressure on nerves controlling his leg functions causing him the loss of their use. Radiation treatments were less successful than hoped for and Bruce was scheduled to begin chemical treatments on or about the 7th of October. Bruce has been moved to the Kenosha Care Center, 1703 60th Street, he is on the 2nd floor. As can be expected, Bruce has his up and

down days, but would very much like visitors. With the ongoing treatment, short visits are recommended, but come often.

While undergoing a checkup at a Kenosha hospital, Herb Ladwig, W9PHJ, experienced an intravenous solution reaction. His system didn't care for the procedure and rebelled. The resulting swelling required Herb to spend several anxious days in the hospital before normalization returned to his body and he was allowed to return home. At this writing, I do not know if the reaction's cause had been determined.

On the 20th of last month, the Chapter held its annual meeting and election, several of the nominees were not present. And, I heard rumors to the fact that if a candidate for office was absent from the election, the candidate could return to a future meeting finding him or herself elected to office. And I have to be out of town that day; hopefully all the current officers will wish to continue at the helm for another year (I hope).

The location for the November 18th (Monday, 7:30 p.m.) meeting has not been set to my knowledge. I'll guess it will be held in Racine and we will hear about it on the Thursday evening 9 pm net on 147.270 MHz.

73, Larry McCalvy, WA9JMO



Washington County Amateur Radio Club

Tom Waldschmidt, N9LZW,
Secretary
465 Elder Lane
Allenton, WI 53002-9799

Club Repeater: 146.73 MHz

MEETING MINUTES October 10, 1996

The October 10, 1996 membership meeting of the Washington County ARC was called to order at 7:33 P.M. by Vice President Gary Sutcliffe, W9XT. There were 11 members and 2 guests attending. The meeting began with attendees introducing themselves.

The minutes of the September meeting were read by Secretary Tom, N9LZW. There was a motion by Brian, N9LOO, seconded by Bill, N9IBU, to approve the minutes. Motion carried.

The Treasurer's report was read by Treasurer Dave, KA9RNU. There was a motion by Sherm, W9NGT, seconded by Jim, KB9LTW, to accept the Treasurer's report.

ARES REPORT

Gary, W9XT, explained that President Walt, N9LLS, was unable to attend tonight's meeting but that he had some announcements to make. This year's SET (simulated emergency test) is scheduled for October 12. The phone tree will be activated and a net will follow on the 146.73 repeater. Bill, N9IBU, said that the phone tree will be activated at 10:45 A.M. with the net following at 11:00 A.M.

Gary, W9XT, also announced that Hartford's Annual Christmas parade is scheduled for November 10th.

Brian, KB9NLF, announced that the club is providing communications support for Kewaskum's Kettle Country Kolors' 5K Run/Walk on October 12. Six or seven hams have offered their assistance but more help is welcome.

This Saturday's club breakfast is scheduled for the Slinger Inn in Slinger at 9:00 A.M.

OLD BUSINESS

Jim, KB9LTW, said he was unable to get the club's letterhead from Don because he has been out of town. Jim intends to send for Kenwood's newsletter.

NEW BUSINESS

Gary, W9XT, announced that next

week is the ARRL's National Amateur Radio Week.

Sherm, W9NGT, explained that he has spoken with Jim Romelfanger, K9ZZ, who publishes the *Badger State Smoke Signals*. The BSS is in need of some new equipment and is looking for donations. After some discussion, Sherm made a motion that the club donate \$50.00 to the *Badger State Smoke Signals* toward the cost of this needed equipment. Motion was seconded by Jim, KB9LTW. Motion carried.

Jim, KB9LTW, questioned the manner in which the 146.73 repeater transmits PL. Jim wanted to know if the repeater passed the received PL tone or if it canceled the received PL and transmitted its own tone. Sherm, W9NGT, explained that Motorola has jumpers that allow it to be done either way. The preferred method is for the repeater to transmit its own crystal controlled PL tone.

There being no further business for the meeting, Sherm, W9NGT, moved to adjourn the meeting. Motion seconded by Bill, N9IBU. Motion carried.

Respectfully submitted,
Tom, N9LZW, Secretary

Following the meeting, members were treated to a slide presentation by Paul Hellenberg, KS9K. Paul's ham radio interest is in multi operator contesting.

Paul has four, tall, rotating towers on his 13 acre lot. Each tower has multiple, stacked antennas. The base of each tower serves as an anchor point for others.

Paul's most recent project was the installation of an 80 meter, 3 element beam antenna. This beam antenna measures 60 feet by 90 feet. It was mounted on top of a 120 foot tower without the use of a crane. Needless to say, Paul and his crew are getting very experienced at tower and antenna installation.

Paul also joked that he has been able to discourage further development in his neighborhood by storing tower sections near his lot lines.

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The Racine Megacycle Club



Club Station W9UDU • Racine, WI
ARRL Affiliated
Providing Communications for American Red Cross and ARES

Alex Voss, N9RGX, Secretary
c/o RMC • P. O. Box 3 • Racine, WI 53401-0003

MEETING MINUTES MONDAY, SEPTEMBER 9, 1996

The meeting was called to order at 7:34 p.m. local time by President Rob Madson, KF9ZT.

The Treasurer's report was accepted as read.

The Secretary's report was accepted as read in the BSSS.

Rob, KF9ZT asked for three volunteers for the nominating committee for the November club elections. Dan, KA9OIL, asked the members of the board who was interested in running for re-election. All members of the board responded with a show of hands.

Pete, KB9LXM, has been working with a group of people doing some fun things on Thursday nights. Every Thursday at 7:30 p.m. they have been holding an impromptu Morse code class at the Red Cross building.

Rob, KF9ZT, has also been talking with Larry, WA9JMO, about starting another Ham Radio Class. He said that we are trying to bring more people into the ham ranks. We are also trying to change our federal tax code status to a not for profit organization.

Dennis, WB9SVM said that he "didn't remember" the last hidden transmitter hunt. The last fox was Dennis, WB9SVM, and Leah, KB9KUA. There were 3 hunt teams. The next hunt will be on this Friday, September 13.

Bill, W9OVZ, gave the report on the Generator. He said that what had happened over the years we have had a problem with a squeaky bearing. And the first thing some one would do was to spray it with WD-40 and the problem would go away for a little while. Incidentally that generator, unlike an automobile draws air through the engine before it goes through the radiator.

Over the years that radiator picked up a lot of dust and dirt and was at least 50% clogged. This of course would cause the generator to over heat. Unbelievably he was able to find a new water pump for the 50 year old generator in Kenosha. He also put in a new sealed bearing for the idler arm, and it will not need to be greased again. DO NOT DO THAT WD-40 FIX AGAIN!

Dan, KA9OIL, said that we should consider getting a spare tire for the generator trailer.

Dave, AA9HL, still has 40 seats for the December Trolley ride meeting. It's an all you can eat chicken dinner (in 40 minutes) then a ride around the city in the Racine Trolley to see the Christmas lights.

Cheryl, WS9P, gave us an update on Bruce Zabler's (K9RRS) condition. Bruce has been in the hospital for some time. She spoke with his wife, Naomi, and it would be nice if we gave blood in his name. (The Racine Blood Center is located at 3532 Meachem Road 53405 tel. 554-5449).

Due to Bruce's illness, the local packet BBS is being handled by Carl, N9BYS. Please update your addresses.

Arne, KA9ZPY, suggested that the club start a "sunshine committee" for such situations that may arise with club members. The idea was accepted by the membership informally and Kathy, N9ZWE; Dave AA9HL; and Leah, KB9KUA, volunteered to be a part of that.

Cheryl also mentioned that Richard Larsen, NW9M, was also in the hospital. He has helped us out numerous times at the Racine test site.

Cheryl then thanked all that helped with the RMC's Special event station. And about 90% of the QSL's have been sent.

She then brought up the HAM RADIO CRUISE. She has the cruise books for us to look at. She also has general information for those who are interested.

The Goodie Box Went to Tony, N9ZWM.

The next meeting will be held at CASE-WEST. We will be touring the Satellite computer network used by Case corporation, 5729 Washington Ave.

The Meeting was adjourned.

Respectfully Submitted,
Alexander G. Voss, Secretary, RMC

MEETING MINUTES October 14, 1996

The meeting was held at CASE-WEST, 5729 Washington Avenue, Racine, WI. Before the meeting, the Club toured the Satellite Computer Network at CASE Corporation.

The meeting was called to order by President Rob Madson, KF9ZT.

UPDATE on Bruce Zabler, K9RRS. He was discharged from St. Mary's Health Hospital, and is now at Kenosha Care Center, 1703 60th Street, Kenosha, Wisconsin. If you would like to visit, please keep visits short as possible. Please park in the east end of the parking lot (the other doors are locked after 4 p.m.). Bruce is looking better and in good spirits. He doesn't like the food, though. Please visit on weekdays after 4 p.m. and on weekends. A collection is being put together for Bruce and his wife, Naomi. 100% of all funds will be given to the family.

Bill, W9OVZ, said that the generator is done. He and Al, N9ZWJ, have done a good job; a few smaller details need to be attended to. The battery should be trickle charged once a month of the club should buy a smart charger so it can be plugged in and left alone. We also need a new petcock for the gas. It drips 1 drop per minute. And the battery charging system doesn't seem to work correctly - we need an electrical schematic for the generator. The generator ran successfully for one hour.

Larry, WA9JMO, said that we will try to organize classes to start in January of next year.

The Goodie Box was left in the care of Tony, N9ZWM.

Respectfully submitted:
Alexander G. Voss, Secretary, RMC

Woody says next solar peak under four years away

According to data provided by the NOAA/Space Environment Center, Woody Minar, K9EF, says that Cycle 23 (the next solar cycle) should peak around August 2000. The 50% rise time should be in early (spring) 1998. Until then, you'll

have to live with props as they have been for the last 4-5 years. There is a fast rise time and slow decay time related to the sun and its effect on propagation. January 2006 should look about the same as January 1998.

Woody has been tracking the 2800 MHz Solar Flux and Planetary Alpha indices for every single day since May, 1974 - almost 10,000 individual pieces of information!

Woody is back stateside from England and is now at his home QTH: 13508 Tabscott Drive, Chantilly, VA.

Woody Minar, K9EF

Red Cedar Repeater Association, Inc.

Steve Hart, KA9OMC, Secretary

E616 810th Avenue

Knapp, WI 54749

2-Meter Repeater: 146.01 Input/146.61 Output

Greetings, RCRA members and guests.

We now have had two meetings at our new location, and it looks like this will work for the number of amateurs we have attending. Our waitress always seems friendly and happy to see us. Jeff, N9PPE, reminds us that the Peppermill Too also has a fine breakfast menu.

Gene, KC4VXO, gave us an update on AMSAT activities at the September 24 gathering. Gene indicated that in the July 31 update, there is mention of a possibility of getting a satellite on the RN-5 launch, scheduled for February 27.

Best wishes to Gerald Leff, N9LRV, at Menomonie, who plans on retiring soon from 3M. It is time to discover that lake in the back yard.

A late September Saturday found Ed Kilanski, N9MMC, celebrating his birthday at daughter KA9WZP's residence near Knapp. Son-in-law Ron, WB9WKO, and his son, Jody, KA9WZP, were also on hand for the celebration.

Chuck Thomas, N9FVA, at Menomonie, has been working on an article for BSSS pertaining to the Shuttle visit at River Heights High School.

Dan Perkins, N9HME, at Eau Claire, reports that the steam engine at Carson Park has been prepared for its trip to the Altoona shops where it will be entirely reworked for recommission. Though Dan stays busy with many volunteer efforts, he has recently found time to renew his cycling hobby.

Ed Van Sickle, NQ9X, at Whitehall, has upgraded his HF station and now has a Kenwood HF amplifier for sale.

Net Control Stations sought for help with BCAR flights

Joe Mayenschein, WB9SBD, Hillsboro, and the group he leads which launches balloons carrying various Amateur Radio packages, needs someone willing to assist them on flight days by controlling a coordination net on HF.

Requirements are basic: A General Class or higher license, and the ability to be in contact with the launch site team on either the Baraboo 146.88 repeater or the N9KAN repeater system of repeaters on either UHF or six meters.

The net runs for a few hours, and are run for hams who are not in range of repeaters near the launch site near Hillsboro. The net runs to provide current information on launches before, during, and following each flight, and operate on either 40 or 75 meters, depending on HF propagation conditions on launch days.

If you would like to help, contact Joe via e-mail:

mayen1@tcs.itis.com

or call Joe at (608) 985-8710.

Joe Mayenschein, WB9SBD

A self-sketch of your editor



Happy
Turkey Day!

Jim Romelfanger, K9 Zed Zed

Jim, WB9YMB, and wife Marion celebrated 53 years of union this year.

Lyle Miller, WB9OKQ, at Star Prairie, plans on attending the "Big One" hamfest in the Twin Cities. Lyle said "He would be the one there with the HT and hand microphone strapped on." Hi, hi.

Betty Fuller, N9XUJ, at Menomonie, won a WCCO TV weather umbrella this summer.

Tim Rose, WB9PMF, reports his dad, Bob, N9VOY at Chippewa Falls, is now 2-meter mobile.

Scott Kilde, KB9NIR, at Cedar Falls, picked up the all-mode 2-meter Kenwood from Tim, WB9PMF, and has been making contacts.

Please have your Smoke Signals renewals to me by November 10 so that you will not miss any issues.

Our last social hour for 1996 will be November 26 at 1414 9th Street, Peppermill Too, in the L-Mart shopping complex, Menomonie. Meeting time is 7:30 p.m. See you there.

Steve Hart, KA9OMC
RCRA Secretary/Treasurer

Washington County Amateur Radio Club

Continued from page 12

Breakfast and Event Schedule

11/02/96, 9:00 A.M., Mineshaft in Hartford
11/09/96, 9:00 A.M., Slinger Inn in Slinger
11/10/96, 2:00 P.M., Hartford Christmas Parade, (need operators)
11/14/96, 7:30 P.M., Membership Meeting, Courthouse in West Bend
11/16/96, 9:00 A.M., Parkside Cafe in Jackson
11/23/96, 9:00 A.M., Corfu in Richfield
11/30/96, 9:00 A.M., Fay's in West Bend □

ManCoRad Radio Club

Continued from page 12

to look into possibly changing the date of the hamfest due to its present nearness to the Dayton fest.

Red noted that the .61 repeater is in the shop getting the transmit and receive looked into and the PL installed.

A motion was made to adjourn by Dick, seconded by Eric. The meeting adjourned at 7:56 PM. Refreshments, brought in by Glenn, were served after the meeting.

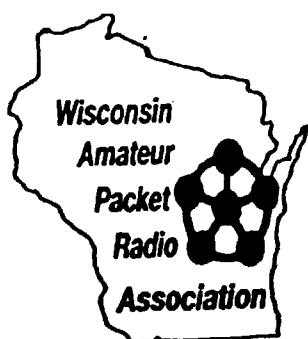
Submitted for approval:
John Meyer, NZ9Z, Secretary

ATTENDEES

Glenn	AA9MT
Red	N9GHE
John	NZ9Z
Eric	WD9IAB
Randy	KB9ONC
Dick	N9QFY
Ken	K9HAG
Mary	KB9GOY
Bill	N9XEZ
Chuck	W9GXD
Denise	N4WGK
Roger	W9NPX
Bob	KB9INK
Ken	WB9OBX
Les	WB9MNQ
Clancy	K9WIX
Barney	N9XER
Chuck	N9WUN
Paul	N9QFX
Bill	K9DUX
Fred	W6BSF
James	KB9GOX
Julie	N9PZX
Gene	KB9KXF

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THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association

Bob Gedemer, KA9JAC

609 Wilson Street • Neenah, WI 54956

Andy Nemec, KB9ALN, Editor • 720 N. Broadway (Upper West) • Green Bay, WI 54303

WAPR News - October, 1996

by Andy Nemec, KB9ALN

Greetings again, friends. An odd month we have had for weather, alternating between the chills and warmth here in the Northeastern part of the state. If you are like most people, you have found yourself in and out of the shack depending on the weather. I hope you have found time to look at your packet station and follow what has been happening lately.

The new node Rudolph, Wisconsin has indeed changed aliases as we had presumed it would. The call is still W9DQA-5, but the alias is now #RUD4.

There is still no word on the planned Timm's Hill node stack. As soon as I hear more, I will certainly pass this on.

There is a coming event that you should keep on the lookout for. We will have our fall WAPR meeting soon. As of this date, I do not have details on the meeting site other than it will be in the north-central or northwestern part of the state. Keep checking your local BBS for a date and time. Sure hope you can make it there and let your views known.

One of the activities planned to take place after the meeting will be a TCP/IP Seminar. This will give you some basic knowledge on this mode of packet operation. It will be geared toward both end-users and Sysops. It will not give you every little technical detail on TCP/IP operation, but will give you some good working information so you become more familiar with it.

Last month I talked about the large number of 7+ files that have been making the rounds of the BBS system in Wisconsin. I had asked for input on this matter. As you might remember, I wondered if anyone was using this system of encoding and decoding Binary files here in Wisconsin. I sent a message to ALLUSA asking the same question. To date, I have only heard from Joel, N9BQM. In addition to being our chairman, Joel operates a BBS in Pittsville.

Joel tells me that he, perhaps like a lot of other folks, does not have the means to decode these files to see just what is in them. He passes them through his BBS and forwards them as is. As WAPR is not about censoring, he is not anxious to kill off these files. Joel's BBS is not near the end of the line as our BBS in Green Bay is, so he figures that passing them on is best.

On the other hand, our BBS in Green Bay is near the "end of the line". I know of no one who is capable of (or interested in) decoding these files. In addition, I am concerned about their content. Occasionally, I have seen messages warning that the content of these messages is illegal, or that the files sent have viruses in them.

One proposed way of handling these messages is to have a statewide central "7+ Server". This BBS would specialize in the handling of these files. Messages would occasionally be sent through the BBS system informing packeteers of the existence of a new file. The file could then be obtained with the REQFIL function of a local BBS. This would cut down on the forwarding load of the BBS system, yet give people who use these files an opportunity to get and use them.

The problem is, I do not know enough about the "7+" system to know if this will work. I have also had no feedback other than the message from Joel.

If you have any thoughts or information on this system, by all means, do let me know. I will be pleased to make this information the focus of a future "Using the Wisconsin Network" article. The more people know about this mode, the better we can make intelligent decisions about the handling of these messages.

So by all means, contact me with information and opinions. My packet address is: KB9ALN@KB9ALN.#GRB.WI.USA.NA I will be pleased to pass along your opinion in a future column.

That is all for this month. Don't forget to keep an eye out on your local BBS for the announcement of the fall WAPR meeting.

Until next month, 73 from Andy.

Using the Wisconsin Network - Part 21

by Andy Nemec, KB9ALN

One of Amateur Radio's primary reasons for living is to handle messages on behalf of other people. Sometimes these are mere demonstration messages of the routine variety, some are actually important emergency traffic. The need for relaying messages in an orderly fashion was found by none other than Hiram Percy Maxim himself in 1913. The ARRL and the National Traffic System were born of this need.

As with virtually any mode of Amateur Radio operation, packet can and is used for message handling in the National Traffic System (NTS). Like anything else, there is a right way to do this, and a wrong way. In this edition of our series, we will explore just how to use the Wisconsin Network of BBS's to handle NTS Traffic.

If you know anything about the NTS, you know it uses a specialized format. There are reasons for this - NTS operators want to make certain that the message gets through accurately, and want to know what when wrong when it doesn't. For this reason, it is important that you know how to do this properly, and follow a standard format. Knowing how to properly handle a routine message now will be invaluable if a disaster strikes and you have to handle disaster traffic. All that being said, let's look at how to do it.

First, the usual Send command is now changed a little bit. Use the ST command when sending traffic. The line sent to the BBS includes the Zip code, the 9 symbol, then the letters NTS followed by the destination's two-letter state abbreviation.

For example, suppose you are asked to send traffic to me. The person asking you to send the traffic should have a name, address with Zip code, and hopefully a telephone number. In my case, the line you would send to the BBS would look like this:
ST 543039NTSWI

The BBS responds with "Enter Title or Postal Code"

At this point, you send the destination city and Recipient's phone number. In my case, this would be:
Green Bay, WI. <Area Code-Phone Number>

It is important that you limit the number of characters to 37 or less. At this point, the BBS will respond with the familiar "Enter Message, End with 'Z', /EX ('A Aborts!')"

Now, you enter the preamble, the body of the message, and the signature. The preamble appears on the first line, and includes the number of message that your station has handled from the start of the year, the handling instructions, your

call sign, the word check, the town of origination as well as the date and time of origination. Let's say your call-sign is AX9XX, and this is the first message you have handled this year. You sent this on October 31st at 12:01 A.M., and it is a routine message of 10 words. The preamble would appear like this:

NR 1 R HXG AX9XX 10 Anytown, WI 10-31-96 0601Z

The NR 1 is Message number 1 from you station. R is the type of message, in this case Routine. HXG indicates that you should deliver this message without making a toll-call or mailing. 10 is the word check, and you are located in Anytown, Wisconsin. You sent the message at 12:01 A.M. local time on the 10-31-96. Of course, you use UTC time when handling traffic of any kind. This is why our 12:01 A.M. became 0601Z.

This article is not intended to give you a complete tutorial on traffic handling, just how to enter and handle the message via packet radio. If you are not familiar with the contents of a preamble, consult the Radio Amateur's Handbook. The chapter on "Operating a Station" covers this material well.

The next line to send to the BBS separates the preamble from the body of the message, it is simply:

-----bt-----

Then comes the body of the message. After this is sent, you once again send a "break" like the one that separates the preamble from the body. Then we have the signature and reply instructions, if any. It may appear something like this:

John Wapnmember, AX9XX, Anytown, WI. Reply

to:AX9XX#WB9TYT.EN63EB.WI.USA.NA

After this, you send Control-Z (or /EX), and the traffic will be on it's way.

Of course, originating the message is only part of traffic handling. While the BBS forwarding system will handle relaying the message, some person has to deliver it. Delivering traffic can be a lot of fun, especially if the person you are delivering it to is not a ham and you have a chance to educate them a little about ham radio. It is best to deliver the message without all of the preamble stuff - most non-hams have no idea of what it means. If ARL numbered messages are in the body of the message, don't read them to the recipient as "ARL 63" (or whatever), just interpret the number as text.

Naturally, you have no know if there is any traffic on your BBS if you want to deliver some. Use the LT command to determine if there is. You will get a listing of NTS traffic, or "***None Found***" as a reply.

If you do find a piece of traffic and do deliver it, be sure to kill it from the BBS. Otherwise, some other well-meaning ham may find it and deliver it again. Use the format KT followed by the message number to delete the message. If the message number was 14523, KT 14523 would erase the message from the BBS.

Handling traffic is fairly easy with packet radio, if you know how. If you need more information, contact your local ARES Emergency Coordinator. They have a lot of good information and can give you some tips on how to handle traffic.

Until next time, 73 From Andy.



SSB

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FOR SALE: Colorful United States Stamps. 100 all different. \$1.00 postpaid. Richard Regent, K9GDF, 5803 South 26th St., Milwaukee, WI 53221.

THE TEST POINT

(continued from page 3)

SE Metro Area Radio Club (SEMARCO)
Contact: Dave Harrell, NQIPN (612) 459-2678
Test Site: Cottage Grove fire Station
8641 80th St., S
Cottage Grove, MN
TESTING: Third Saturday of the month. 9:00 a.m.

The above information has been furnished by the various VEs. However, it is suggested that you confirm time, date and location BEFORE you make the trip to the test site. Occasionally, a test may be canceled and/or dates and locations changed. A Phone call could save you some grief and a wasted trip.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules. Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN at the address shown on page 2.

FCC stops renewal reminders

As of October 22, the FCC has ceased issuing Form 610R license expiration notices -- reminders to hams that their tickets are going to expire within the next 90 days and that they must request renewal. The last notices sent by FCC covered into February 1997, although the specific date was not available. A Form 610R for renewal must be returned by mail only to the FCC.

An FCC Public Notice is expected within a few days.

The demise of the Form 610R means that hams -- whose licenses are issued for ten-year periods -- must take the initiative to remember the renewal date of their tickets and file a Form 610. An FCC spokesman in Gettysburg says the Commission hopes to have a Form 610 available soon on the World Wide Web to permit on-line renewals.

The W5YI VEC in Dallas, Texas, has begun mailing renewal reminders and FCC forms to hams whose licenses are about to expire. If you receive a Form 610R directly from the FCC, you should return it only to the FCC. If you receive a renewal notice from the W5YI Group Inc and if you wish to have the W5YI VEC handle your renewal for a fee, follow the directions and return the renewal form to the W5YI VEC, not to the FCC.

If your license will expire within 90 days, you may renew your license at no cost by completing an FCC Form 610 and returning it to: FCC, 1270 Fairfield Rd, Gettysburg, PA 17325-7245.

The ARRL Letter, 10/25/96

More Astronaut/hams



Four more NASA astronauts are now licensed Amateur Radio operators! Mission specialists Ed Lu, KC5WKJ; Jean Francois-Clervoy, KC5WKG; and Carlos Noreiga will be on STS-84 in May 1997, and Marsha Ivins, KC5WKF, will be on STS-81 in January 1997. These are Mir docking missions (but not SAREX missions), where we hope to get permission to allow astronauts to use Mir's radios. (By Rosalie White, WA1STO, in *The ARRL Letter*, 10/25/96). In the photo above, Mir is backdropped over a storm in the Roaring 40's near Heard Island in the South Indian Ocean. This 70mm photo was taken during STS-79 in September, 1996.

NASA photo

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FOR SALE: Icom 729 HF + 6, \$300.00/-OBO. Icom 736 HF + 6, \$1400.00 or trade for IC-706. Scott Baselt, N9UBS, N3097 Hwy. 73, Sheldon, WI 54766. (715) 668-5676.

AD SALES REP NEEDED

Badger State Smoke Signals needs an advertising salesperson. A commission is paid, as are certain expenses. If you are interested, please contact Publisher Ken Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, or call Ken at (608) 742-3560.

Yellow Thunder Amateur Radio Club



WB9FDZ (Original Club Call)
K9ODK (Robert L. Prine Memorial Call)



Raymond J. Matlosz, N9MLZ, Secretary
450 West 2nd Street • Reedsburg, WI 53959

The September 15, 1996 meeting of the Yellow Thunder Amateur Radio Club, Inc., was called to order at 7:37 p.m. by Steve Schulze, N9UDO.

The minutes of the last meeting, as published in the BSSS, were accepted. Jim Decker, WB9UQT, gave the financial report.

OLD BUSINESS

Steve Schulze reported he has received any information from ARRL regarding special event insurance.

The members present decided to make a deposit on the Sauk County Fairgrounds for the Circus City Swap Fest to be held by the club on August 9, 1997. Steve reported Bill did not have a chance yet to make reservations for the club's Holiday Party in December.

NEW BUSINESS

Nominations were made for club officers. A motion was made by Art Kleefisch, W9WSS, to nominate all the present officers for another term. The motion was seconded and the vote was unanimous for club president, Steve Schulze, N9UDO, Bill Hommel, KA9QFJ vice president, Raymond Matlosz, N9MLZ, and Jim Decker, WB9UQT, for treasurer.

Steve Schulze then completed the state form for the club's non-profit status.

Buck night winner was Bill Hommel, KA9QFJ, who was standing by on 2 meters. However, those present thought, even with the marvels of radio, it just wasn't the same as being at the meeting. Bill was congratulated for being re-elected as vice-president. He was then told he won buck night but no body, no buck. Sorry, Bill.

The meeting adjourned at 8:15 p.m.

Jim Paul, N9LKY, then gave a demonstration and talk on amateur microwaves.

The next meeting will be held Wednesday November 15, 1996 at 7:30 p.m. at the Baraboo Civic Center.

Sincerely,
Raymond J. Matlosz, N9MLZ
Secretary

The following members were present:

Steve Schulze, N9UDO	Baraboo
Jim Paul, N9LKY	Merrimac
Art Kleefisch, W9WSS	Baraboo
Raymond Matlosz, N9MLZ	Reedsburg
George McArthur, N9ZGY	Baraboo
Bill Klinkner, N9KXX	Sauk City
Anne Klinkner, N9PQL	Sauk City
Thomas Harrison, N9PQJ	Reedsburg
Jim Decker, WB9UQT	Baraboo



SHEBOYGAN County Amateur Radio Club

Chris Jacobs, N9VKC, Secretary
W4065 Dekker Rd., Waldo, WI 53093

The September meeting was called to order by President Penny Ten Pas, N9TCF.

The program for the evening was a video on amateur sats, which was a great lead for this upcoming month's project. Along with members from the Sheboygan Astrological Society, we will be attempting to receive signals from NASA's next launches to Mars.

The Mars Relay Flight Test will be a two-way test of the Mars Relay onboard the Mars Global Surveyor and Russian Mars 96 spacecraft. The test is planned to occur shortly after spacecraft launch while each spacecraft is near the Earth. The Flight Test will involve the support of the

UHF-capable worldwide radio amateur community. (BSSS will be printing a feature story about the SCARC's work on this project in our December 1996 issue. - editor.)

Saturday, October 26th, is set for our antenna building day, and by the time this makes press that date will have passed. If you would like more information on this project, please email n9vkc@excel.net and I will point you in the right direction. I can't say how exciting this is.

Hopefully, by the next issue of BSSS I will be able to report on the project and how it went.

Chris Jacobs, N9VKC

MARS drops CW

All CW nets and other CW activity in the Military Affiliate Radio System (MARS) were ordered to cease operation effective October 1, 1996. After that time, no CW nets or other CW activity will be allowed on any DOD MARS frequencies. A final MARS CW message was transmitted simultaneously on Army, Navy and Air Force MARS frequencies on September 30.

The ARRL Letter, 10/04/96

Silent Keys

Harold J. Isenring, W9BTI. October 17, age 81 of Colgate. Was employee of Sears Robuck & Co. for 47 years and Amateur Radio operator since 1946.

Emmeth J. Schoen, W9RYR. October 16, age 79. Member of Milwaukee Radio Amateurs Club and Carpenters Union Local #264. - Rich Regent, K9GDF

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July 12, 1997
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American Legion Park
Shepard Avenue • Oak Creek, WI
(414) 762-3235 Extension 58
P. O. Box 102 South Milwaukee, WI 53172

Fox Cities Hamfest
Sunday, November 3, 1996
Starlite Club, Hwy. 55 north of Kaukana

HAMFEST INFO:
Chad Pennings, N9PRC
318 E. Brewster St.
Appleton, WI 54911
(414) 759-0799

EXAM INFO:
Larry Siebers, KD9IA
(414) 759-1167

Lakeshore Hamfest
and Computer Swapfest
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Intersection of Hwys. 42-151 and I-43 on Cty. Hwy. R
Saturday, May 10, 1997
For more information, call:
Glenn, AA9MT: 414-684-7096
Red, N9GHE: 414-684-9097 (nights)
ManCoRad Radio Club • P.O. Box 204 • Manitowoc, WI 54221-0204

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1520 NAKOMIS AVE., LA CROSSE, WI 54603

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8 a.m. to 2 p.m.

UNIVERSITY CENTER, U.W. STEVEN'S POINT
Info: John Kalina, KA9DJA (715) 342-9714
1240 North Point Drive Stevens Point, WI 54481

Eau Claire Amateur Radio Club
SWAPFEST
Saturday, July 12, 1997
Eau Claire County Fairgrounds
Intersection of Highways 93 and I-94
Carol Ceraso • (715) 723-9205 Liz Searing • (715) 834-1303
P.O. Box 1867 • Eau Claire, WI 54701
<http://www.edp.net/~mceraso/hamfest.html>

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Sunday, July 27, 1997
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COMPUTER SWAPFEST**

8 a.m. to 1 p.m. • Circle B Recreation Center
Intersection of Highway 60 and County I
Exams by Badger Examiners, c/o Gary Sharbuno,
5119 W. Willow Rd., Brown Deer, WI 53222
Swapfest sponsored by the Ozaukee Radio Club
11448 N. Laguna Drive • Mequon, WI 53092

Kettle Moraine Radio Amateurs
SWAPFEST
Sunday, October 13, 1996
Waukesha County Expo Center
Info: KMRA Swapfest P. O. Box 411
Waukesha, WI 53187-0411

Red Cedar Repeater Association, Inc.
AUCTION
February 25, 1997 • 7:00 p.m.
American Legion Post 53 • 634 Water Street
Eau Claire, WI
CONTACT:
Steve Hart, KA9OMC 715-665-2374
E616 810th Ave. Knapp, WI 54749

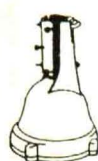
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